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ADDRESSES.

ADDRESS ON SURGERY.

Delivered at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

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A retrospective examination of surgical literature since the advent of anesthesia does much to make the thinking student wonder whether the longevity of the human family has been conserved, or its physical welfare materially enhanced by modern surgery. That the operating room has been robbed of its terrors by ether and chloroform is conceded. That the clinical chart no longer presents the erratical markings of the clinical thermometer as influenced by a body aflame with the products of infection, ignorantly permitted to obtain a foothold in the human economy, is also admitted—but has not our feeling of safety, engendered by our acknowledged perfection in surgical detail, opened a wide field of surgical speculation and experiment which serves rather to enrich the surgeon than to minimize disease and prolong life. In my humble opinion the segregation of our professional work is in a large degree responsible for much of the opprobrium which attaches to the over-zealous pursuit of a given theory or special method of doing an operation whose only excuse for being done is the desire to elaborate a hobby. The practice of the various branches of our profession to-day is practically relegated to the different specialties. I would not underestimate or undervalue the great achievements of such men as Senn, Kelly, Price, Polk, and many others in this country, and with such guiding hands as Keith, Tait, Creig, Smith, Treves, Fenwick, Batlin, Heath, and a host of others in the British Islands. With continental Europe teeming with the literature of such medical Nestors as Billroth, Charcow, Virchow, Pasteur, Koch, and the prominent members of the present French school, is it any wonder that we occasionally pause in amazement at the accomplishments of the members of "our cloth" in all the civilized countries of the world, and wonder whether it is not all a chronicle that might have been contemporaneous with the Arabian Nights, or heralded by a Sancho Panza. That this whole magnificent fabric should have been evolved from an intimate acquaintance with the primary cell, whose intrinsic importance is just beginning to unfold itself to the scientific thinkers and workers in the various branches of our art, is harder to conceive and more difficult to believe than the revelations of the Book of Genesis or its associates in the whole autonomy of man.

It is said that "the sovereignty of reason is the sphere of morals; or man's power as possessed of reason to give law to himself." In following this line of thought he who assumes to dictate the destinies of so many of his fellow creatures should be well caparisoned for the fray and should be symmetrical in his professional growth in order that he may discharge with dignity, proficiency and honor the obligations that fall to his lot as a surgeon. He can not be such an one, unless his professional superstructure is built upon a fundamental basis, such as is born of a thorough knowledge of all the collateral arts and sciences which bear intimate relation to his life work. I believe that the specialist of the future, no matter what avenue he elect to follow, should be a regular graduate in all the branches of medicine, and should serve a sufficiently long period in the field of general medicine to raise him above the level of mediocrity before he assumes to pose on the witness stand as an oracle in nervous disease, or at the bedside to advise for or against an abdominal section. I confess to a feeling of sentiment and regret when I think of the decline of the family physician. There was a time in the childhood of most of us when that functionary was one of the most important adjuncts of the domestic circle—his edict was law—his coming was a pleasure and his going a regret. He was consulted in matters domestic, financial, political, and if his advice was not always heeded it was usually sound and healthful. As the nineteenth century advances he is becoming year by year a greater rarity, and I regret it, for I believe it is from the ranks of such men that our specialists should be recruited. That time-honored quotation from the early Sanscrit is specially apropos in this connection: "A surgeon not a physician is as a bird with one wing." How truthful and full of meaning this old aphorism is—if his surgical growth is not symmetrical, his professional career must of necessity be full of doubt, hazard and disappointment, fraught with wretchedness to himself, danger to his patient, and unjust criticism of his art.

A review of the evolution of surgery as a science since the birth of anesthesia, is indeed a wonderful story. Operative surgery was practically shorn of its terrors and in less than a quarter of a century thereafter, through the agency of Mr. Joseph Lister and his co-workers, the possibilities of surgical convalescence were understood, and now with the revelations of the microscope in connection with bacteriology we would seem to be approaching a surgical millennium. And we might almost think we had attained it, were it not for some of the license which is a common accompaniment of great victories—I refer to what I consider some of the abuses of nature's (now known) marvelous resources. There is unfortunately no longer need for hurry in the operating room, and convalescence is assured in most cases, if we are surgically clean and our work reasonably well done. I say, unfortunately, because if the recording angel who stood at our elbow had spoken her mind, we

would have been admonished that although we had snatched our confiding victim from the "valley of the shadow," we had possibly also added weeks, months, and perhaps years of suffering and woe to one who might have been spared the long exposure of body surface or vital structures to the curious gaze of one who should have been ready to do the work, and do it promptly, when the patient was ready. There is little doubt that anesthesia is responsible for just this abuse of the operating room, and that many a tortured nervous system lives to-day to testify to the truthfulness of this statement. Let us review operative surgery in a general way and see what it has accomplished:

The cerebro-spinal axis has attained a prominent position in the forefront of latter day surgery, as a result of the painstaking untiring labor of such men as Ferrier, Horsley, Thorburn and others abroad, and a goodly array of fellow-workers on this side of the Atlantic, marshalled by such men as Keen, Roberts, Starr, and kindred students in the same field. They have done away with occultism deciphering the many maladies that owe their origin to organic changes in these most important structures. The physiology of the brain and cord is beginning to be understood, and fitting surgical remedies are at hand to successfully combat these diseases. Craniectomy has come into the surgical lists for recognition as a remedy for microcephalus, but its usefulness is doubtful and its legitimacy questioned by some of our best authorities. Laminectomy for the paralysis of Pott's disease is an operation of much less favor than formerly —it undoubtedly had a useful place in surgery when applied to paralysis as the result of trauma resulting from fracture, hemorrhage or inflammatory pressure, but otherwise the limitations of its usefulness are very circumscribed. An infinity of surgical procedure has been suggested and practiced for epilepsy but, except as applied to the disease of traumatic origin, all are of doubtful utility. One exception possibly may be taken to this statement—in occasional cases of well-marked focal or Jacksonian epilepsy—but then only after the most critical study is surgical interference to be entertained. Excision of the Gasserian ganglion for trifacial neuralgia is a comparatively recent acquisition to our list of operations. Its environments are such as to make its removal of the greatest surgical difficulty, and it will be rarely undertaken except under the most trying conditions.

Although ophthalmology has made such praiseworthy growth since Von Grafe revolutionized the extraction of cataract, it has not been without its surgical peccadillos. For example, when the popular clamor against clapping glasses on all offending eyes became of rather alarming proportions, graduated tenotomy was suggested as a remedy for all muscular insufficiencies, without other mechanical means, and it was months, yes years, before operators awakened to the fact that a buttonhole was a very good and permanent aperture in some fabrics, but muscular tissue was not among them. Otology also bears its quota of caprices, conspicuous among them being the indiscriminate angling for the ossicles, which would have reached far more extensive limits had it not been for such men as Jack and Blake whose faithful and honest reports have done much to stop this questionable method of treating dry catarrh of the middle ear. I think it is generally conceded that for sound conducting purposes, the ankylosed ossicles as a stiff conducting rod between the drumhead and the "oval window" is far better than to have nothing but an air space interposed between the outside world and the broken foot-piece of the stirrup, bound lightly to the entrance of the labyrinth, not to mention an incus supposed to have been removed, which is still crouching in the attic, there slowly necrosing, unmindful that the war is over.

The naso-pharynx has become a labyrinth of marvels to the layman as well as the specialist—compromise of its functional integrity threatens the maintenance of all the special senses; its serious impairment is one of the gravest calamities of early childhood and may interfere with all the functions of organic life. It is the breeding ground of many of the microörganisms that threaten us upon every hand. A knowledge of its anatomy and physiology is an imperative necessity to the successful surgeon. There is little doubt that in the coming years the indiscriminate burning, lancing, probing and swabbing will become less general and the treatment of naso-pharyngeal disease will furnish fully as much of benefit to mankind, and less to criticise in its extravagances.

The surgery of the tongue, jaws and face has not materially changed in the past decade, except the improvement noticed in our plastic work about the face, aided by the Thiersch method of skin grafting. Esophageal surgery has materially increased its boundaries since gastrostomy has become an operation of comparative safety. Drainage of pulmonary cavities and operative invasion of the mediastinal spaces are, fortunately, rarely a necessity.

If his statistics are reliable, Professor Halsted has added fresh laurels to his already brilliant record, in his recently published demonstration of what can be accomplished by early and thorough removal of the breast for malignant disease; to my mind it is one of the most important bequests to modern surgery; it bids fair to revolutionize the statistics of this operation. The ghastly history of breast surgery will certainly be improved when the laity become aware of the fact that hope of cure is to be entertained if the disease has early recognition and proper operation.

In a seriatim review of human anatomy, from a surgical standpoint, one does not invade the infra-diaphragmatic territory without some misgivings. It is here that we find a theater frequented by nearly all the specialists. The stomach, the gastro-intestinal circuit inclusive of the gall bladder and intestinal tube, kidneys, ureters, appendix, cœci, uterus, Fallopian tubes, ovaries, bladder and the genitalia, male and female.

Pylorectomy, and the various other plastic operations for gastric cancer, are triumphs of skill on the part of the operator and of endurance on the part of the patient, but for many obvious reasons should be rarely practiced. Gastro-intestinal anastomosis is vastly more humane and will, in most cases, contribute as much to the patient's comfortable longevity. The gall bladder has deservedly attracted much attention in the past few years; in suitable cases where anastomotic communication between this viscus and the duodenum is desirable, we have a most useful adjunct in the ingenious device of Murphy—which has proved also a great comfort in operations of emergency where lateral approximation of the intes-

tinal canal becomes a necessity. Whether it will supplant the older methods of end-to-end union of the divided gut is still a mooted question. It seems a queer dispensation of fate that so small an organ as the vermiform appendix should create so much physical woe and so much professional bickering. To the man whose faith is pinned to internal medicine (if we are to believe their reviews of its inflammation) it is not commonly the cause of much solicitude. To the surgeon who is brought in frequent contact with it at the operating table, and who has so often seen its frightful ravages, "under cloak of modest mien" it is a never-ending source of anxiety.

I hail, with gratification, the turning tide in favor of honest conservatism in the surgical management of disease within the female pelvis. It is a lamentable fact that in this, as in every other branch of surgery, in his evolution from surgical boyhood to maturity as an accomplished master of his art, the surgeon's pathway is strewn with wreckage which can only be atoned for by the greater good he is able to dispense to suffering humanity. Every State in the Union has its dozen or more laparotomists mostly gathered from the ranks of the younger men—each struggling to outdo the other in the race for supremacy, and each must of necessity leave behind him a trail of mistakes, misfortunes and accidents. A very large percentage of the material from which he gleans his experience is furnished by the female sex, and her pelvis is a most prolific field for adventure. If this battle could be fought by the giants who represent the advanced and mature thought of the day, how much better for suffering womankind might it all be. The day has gone by when every so-called cystic ovary will be removed, when ovaries are removed for symptoms rather than disease, when all tubes will be removed because they contain pus or serum. Plastic surgery will take the place of these more radical measures. Myomectomy will take the place of many hysterectomies now being done. The vaginal route will be the one of election when possible. Trachelorrhaphy will not be advised as it too often has been as a panacea for all the woes of women. Electricity will be left to the few who care to, and know, "how to use it." And in proportion as the scattered remains of her tattered anatomy and function are restored, her enlarged field of usefulness will be a benediction and a blessing to him who has wrought this change.

Bladder, ureteral and kidney surgery has received a recent impetus at the hands of Dr. Kelly, of this city; he has made it possible to secure an accurate ocular review of the mucous membrane of the "female" bladder; with his ureteral catheters, accuracy of diagnosis is attained and intelligent therapy, medical and surgical, can be applied.

The pelvic extremity of man, just now, is in greater jeopardy than any other part of his anatomy, in consequence of the recent investigations of Professor White, of Philadelphia. His remedy for senile enlargement of the prostate is probably not destined to become popular with the sex, but when his comprehensive review of the subject is digested, and we see his deductions and results corroborated by many of the most distinguished teachers in all parts of the world we are constrained to give it serious thought. It is difficult to understand why the removal of functionally inert testes should cause an atrophy of the prostate, but that such a result does follow is established by incontrovertible proof. We have had no experience in this method of treatment of prostatic disease, but a quite large and successful experience with suprapubic prostatectomy and the known repugnance of man to part with any of his organs, *particularly these*, has prejudiced me against the operation. The ingenuity of some of the operators in ureteral surgery has demonstrated the feasibility of lateral anastomosis; it is possible and at times practicable when that tube has been accidentally injured. Some plastic operations upon the kidneys have been recorded, but of date too recent to establish their practicability. The literature of radical cure of hernia is filled with remarkable records of cure, by many different operators and by many different methods. With the exception of the series of cases reported, I think, within the past year by Professor Halsted of Johns Hopkins, none are sufficiently affirmative to make us feel that we ought to advise the operation purely as a cosmetic measure; in other words, a properly fitting truss which amply protects the hernia is a sufficient argument against radical operation. There is an element of doubt as to whether the cure will be permanent, and remote elements of danger in the operation.

There is little that is new or worthy of special consideration in the surgery of the circulatory system and little to be added to the masterly review of Senn in his experimental surgery on nerve suture. Since its infancy, orthopedic surgery has vacillated between the operative and mechanical periods. But a few years ago, arthrectomy excision or amputation was about all the attention the joint received. Then there came a sudden reaction and mechano-therapy came in vogue and is no doubt a great advancement especially in growing bones. I believe America has reason to be proud of its so-called orthopedic measures designated as American.

The conservative treatment of joint diseases is without doubt gaining in favor and demanding more attention from the surgeons of Europe. Lorenz as late as 1892 states that it is very important that the patient has the benefit of sunshine, fresh air and exercise, while the joint is protected by an apparatus which will relieve the weight of the body from the diseased joint, thus permitting freedom of exercise without pain. This has been regarded as fundamental in this country for years. The chief danger now seems to be that they carry the mechanical treatment too far, neglecting the operative.

Not a decade has passed since a prominent surgeon created considerable consternation among his fellows by making the statement that he believed that a cold abscess when it remained quiescent had best be allowed to remain so. Were the question submitted to the orthopedic surgeons of to-day I believe the majority would still be in favor of this treatment.

The aspirator is not such a universal instrument as it once was for the opening of abscesses. The results have been exceedingly unsatisfactory. Even if the flaky condition of the pus does not check its flow through the needle, the abscess cavity refills with great rapidity. From the large needle which must necessarily be used and the repeated aspiration necessary, the fibrous wall soon breaks down and we have a spontaneous opening. Thus this practice has been gradually abandoned and if surgical interference is necessary at all, a free incision with thorough cleansing is now the practice.

Of late years the club-foot shoe has largely given place to the knife and forcible replacement, open incisions, tarsectomy, free subcutaneous division with subsequent retention. The very important and useful treatment of manual and mechanical treatment is almost lost of.

Mechanical appliances, immediate rectification by osteotomy and osteoclasis for the cure of rachitic deformities seem to be receiving more attention than the early diagnosis of rachitis, and the prevention of the deformities by prophylaxis. At present the injection of iodoform seems to be much in vogue, especially in European practice. I believe that a great deal more is claimed for it than it deserves. That immobilization of a given joint is in a large degree responsible for the benefits derived from the injection treatment.

Scoliosis has attracted a great deal of attention in the past, because of the various appliances which have been exhibited, recommending forcible correction; the old treatment by gymnastics hardly seeming to deserve recognition. Torticollis has for its treatment the distinction of nerve excision.

The various appliances for the relief of congenital dislocation of the hip have been largely abandoned, and now we find the orthopedist scooping out the os innominatum for the reception of the head of the femur.

Operative interference is greatly practiced for the relief of the deformity following spinal or cerebral paralysis. A good-natured quarrel upon traction as a means of fixation in the treatment of joint diseases shows that some one is trying a hobby, if we are to judge by the Orthopedic Section of the New York Academy of Medicine. One would think from articles written and from the number of statistics regarding tuberculous joints, that little if any attention is given any other joint affection, unless it be scorbutic joints which seem at present to be rather gaining in fashion.

Orificial surgery, so-called, is one of the recent fads. It is conspicuous by its absence from the transactions of all surgical deliberative bodies.

CHAIRMAN'S ADDRESS.

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BY E. WELLS KELLOGG, M.D.

MILWAUKEE, WIS.

Gentlemen of the Section on Practice of Medicine, American Medical Association:—I cordially welcome you to the forty-sixth meeting of this Section, here, in the same city, where, nearly half a century ago, the AMERICAN MEDICAL ASSOCIATION, as a newborn infant, gave its birth-cry.

This lusty infant passed through adolescence to maturity, and now in adult life, returns to the place of its birth.

A vast change has come over the medical profession during these forty-six years. The division of labor and the specialization of the practice of medicine has taken slice after slice from the so-called "Section on Practice," and yet I believe that with all the specialization there is no section which should more interest every disciple of Esculapius.

It seems fitting that at this time we should take a backward glance over the past forty-six years to that first meeting of the newborn ASSOCIATION, and contrast the Then and Now.

Such remarkable progress has been made in certain special departments of medicine that many consider the practice of medicine as a whole, somewhat backward. But looking over the past years, we can see a progressive change of ideas and methods which, though less marked perhaps than in the special departments of gynecology and surgery is no less apparent, each year adding to the list of boons conferred upon mankind.

The changes which have taken place can not be better suggested than by quoting the following from the report of the Committee on Medical Sciences, given at the first meeting of the ASSOCIATION in Baltimore in 1849:

"The fact is established that certain etherial vapors when inhaled produce insensibility to pain, and that the most sensitive portions of the living body may be divided by the knife of the surgeon, while his patient lies in a state of unconsciousness."

This astounding fact was at that time one of the recent advances in medicine; and it proved one of the greatest blessings ever vouchsafed to man; yet the committee at that time was divided in regard to their value, one portion considering the limited amount of authenticated facts in relation to the danger of their use, a sufficient ground for opposing them. The same committee stated that another virtue still attributed to quinin was its anti-malarial effect and ventured the opinion, "That there did appear to be something like an antagonism between quinin and malaria."

The salicylates were unknown. Antipyretics were unknown and many others too numerous to mention, the discoveries in chemistry having revolutionized the practice of medicine.

As late as 1877 at the annual meeting of the ASSOCIATION the theory that many diseases were caused by minute organisms was pronounced a seductive but unwarranted assumption.

As chairman of this Section I am required to present any recent advances in the branches belonging to the Section, but in speaking of the recent advances it is not an easy task to determine which are real advances and which are only apparent advances, to be followed by retreats. We, as a people, are prone to follow fads and the medical profession is not exempt from fad followers.

The temple of medicine has been slowly building for centuries, and it continues to rise; but many stones are laid only to be removed because they do not stand the test of time and experience. The ground is strewn with blasted hopes and exploded theories. Half a century ago physicians bled for everything, later the lancet was obsolete, now it is again being rationally used.

The use of antiseptics has been carried to the topmost wave and broken in foam; yet we have learned that avoiding causes of disease is better than removing the disease after it has developed; that the practice of asepsis in medicine as well as in surgery is better than the use of antiseptics; that good hygiene is preferable to the best therapeutics.

Serum therapy more than any other one subject has during the past year occupied the minds of the profession.

It is with the utmost caution, that I approach this latest form of medication. The past year has brought forward a theory and practice, which is either a tremendous farce, or the greatest discovery, in any branch of medicine, since Jenner in 1798 proclaimed

to a plague-stricken world, the greatest scientific discovery ever made by man.

Toxin is prepared in glass vessels containing sterilized and peptonized broth which is infected with diphtheria bacilli from a fresh culture. This culture is kept warm for a month when the toxin is filtered off and injected into a healthy horse two or three times a week for about three months, when the animal is considered immune. From the jugular vein of this immune horse a quantity of blood is withdrawn and the serum from this immune blood called antitoxin is used hypodermically. It is manifestly important that the serum be a pure culture of definite strength; that the diagnosis in every case be a bacterial one; that the operation itself be performed under strict asepsis to avoid the introduction of pathogenic germs; and that it be performed at the earliest possible date in the history of the case.

Serum therapy is daily securing new advocates. If one-half of what has been written concerning Behring's discovery be true it is worthy a trial. Its advocates boldly claim that they can abort one of the most treacherous diseases in an incredibly short space of time; that the remedy is innocuous, and produces no untoward effect when injected into the tissues of healthy persons; that a diphtheritic patient's condition, as a rule, greatly improves almost immediately, the exudate subsequently peeling off, leaving a healthy membrane, and that all abnormal appearances often disappear within twenty-four hours; that it is a prophylactic for seventeen to eighteen days against diphtheria.

But, on the other hand, some careful observers after a trial of months under the best conditions, declare that the remedy does not fulfill the claims made for it; that its uselessness in secondary infections, in diphtheria of the bronchi, and the unfortunate after-effects, as purpura, albuminuria, hemorrhagica, nephritis, arthritis, and other evidences of systemic intoxication which at times have resulted in death, more than counter-balance its good effects.

Extraordinary enthusiasm has been shown upon both continents over this new departure in medicine, but a single year's experience is not enough time to determine its value. Enough has been proved to determine that it is worth a trial in connection with other better known remedies, and we may well content ourselves to await the dictum of time and experience.

The ultimate criterion must be a clinical experience covering a large number of cases under all the varying conditions and circumstances, and this can only be determined by careful work and the lapse of time.

The practice is still *sub judice*, and must pass the stage of empiricism before it can be adopted as a curative measure by the general practitioner.

In this present age, when new ideas flash around the globe with the rapidity of lightning; when the discovery of to-day is upon the lips of the world to-morrow; when countless numbers of men are vieing with each other for the production of a panacea for some of the microbic diseases which have destroyed humanity for ages; we may well be cautious of our conclusions until enough time has elapsed to determine whether the lights in the horizon be a sign of dawn or simply a will-o'-the-wisp shining to lure the traveler from the true path into unknown depths.

In looking back over the wrecks of previous experiments, the false hopes raised by the advocates of tuberculin, and the well-known fact that cases of diphtheria often recover with surprising rapidity with little or no medication, we can well afford to await the verdict of years of experience before pronouncing it a certain specific.

The numberless remedies which have been claimed for almost every disease may well be taken into consideration before we pronounce this a cure for a disease which has long baffled mankind.

The tendency of the profession against the use of antipyretic drugs, except in extraordinary cases, I regard as one of the recent advances in medicine. There can be no doubt that the use of heart depressants in fevers has been carried beyond the limits of reason, and the reaction has begun.

Tuberculosis is each year regarded more as an infectious and contagious disease, and the profession as a whole can not be too active in urging upon the public by all possible means the necessity of regarding it and guarding against it as such. The marvelous fact that persons are allowed to systematically travel over the continent carrying and spreading germs of a disease more fatal, more destructive to human life than any other known ailment, can only be explained by the ignorance of the public as to the danger of such a practice, and physicians have a sacred duty to perform in urging upon the laity the necessity of regulating this matter by law.

LECTURES.

LECTURES ON INTRACRANIAL SURGERY.

X.—THE OPERATIVE TREATMENT OF IDIOCY.

BY EMORY LANPHEAR, M.D., PH.D.
ST. LOUIS, MO.

Continuing the discussion of the operative treatment of idiocy I will first speak of

RESULTS.

The immediate danger is little. As Packard has said (*Annual of Medical Sciences*, 1891): "The procedure is a brilliant one, but of surprising ease in skilled hands." The primary mortality is about 10 per cent. since we have learned exactly how to handle these cases. There is commonly a considerable amount of improvement in many of the symptoms within a very brief period—an improvement that may last but for a few hours or that may be permanent; for example, if the child has been restless and inclined to sway back and forth with the peculiar cry of the idiot, there may at once supervene a condition of happy quietude; if of sufficient age, the patient may begin to notice things that have hitherto passed unnoticed—the general condition is very much as if there were a reversion to infancy; in a face heretofore void and expressionless, there may come a look of intelligence corresponding to that found in a baby a few months old; and shortly after the operation, if progress be favorable, there will be a more or less decided change for the better in the mental condition, as manifested in attempts at playing with toys, self-feeding, and by crying when spoken to harshly. This change I have seen to occur within a few weeks in cases of apparently hopeless idiocy. What the ultimate result will be, time alone can tell. In some cases there has been a marvelous amount of change—for a time—and then a lapse into the same old state.

CASES.

As an illustration of the various types of idiocy I have operated upon, I will relate the following histories:

Case 1. Microcephalic Idiocy—Operation—Improvement.—Harry A., of Riverside, Cal., age 4 years, came under my treatment April 25, 1892. His general health was excellent. When he was about three months old, he had a severe convulsion, which was repeated in a few months, and since then spasms have occurred at irregular intervals, ranging from a few days to a week or two. The family history was good, except that the father and grandfather were inebriates; three brothers, aged 8, 12, and 14 years, were in perfect health. The child had never manifested any signs of intelligence, except to pay close attention to music, and to be attracted by bright colors. He always liked to make a great noise; had never made any articulate sounds, but always whined when not engaged in any noisy play. He could walk a few steps in a hopping sort of a gait, frequently falling; he never made any attempt to feed himself. Examination showed an expressionless face, evidence of only the slightest cerebral development; the frontal region somewhat deficient; occiput unusually well developed but the entire skull much smaller than it should be. The parents were told that very little could be hoped from an operation, but that it would be done if they so desired.

He was admitted to the hospital May 12, and was prepared for the operation in the usual manner. I made the first operation May 13, with the assistance of Drs. J. D. Griffith and J. F. Binnie. A large flap was turned back on the left side, including the periosteum. A half-inch trephine was applied, about one inch in front of the coronal suture; the bone was found to be unusually hard and thick. When the button was removed, the brain bulged prominently into the opening, but pulsated well. With Keen's forceps, a part of the skull was removed,—about three and one-half inches backward, and one and one-half inches in width. Hemorrhage was checked, iodoform applied freely, a rubber drainage tube inserted in the lower angle of the wound, and the scalp closed with continuous catgut suture, iodoform gauze, bichlorid gauze, cotton and bandage. Patient was put to bed at 10:45 with very little shock. At 12 he was very restless and crying piteously; therefore he was given:

℞ Chloral hydrat. . . . . 4.
Elixir potassii bromidi. . . . . .
Elixir simplicis. . . . . āā 16.

Misce bene. Sig.: Half teaspoonful every two hours until quiet.

At 6 P.M. the temperature was 104.5, although there was no evidence of "shock;" he was sleeping, but very restlessly. He was ordered 3 grains of acetanilid, as a result of which the temperature was 103.5 at 11 P.M.

May 14 at 7 A.M., the temperature being still 104, he was chloroformed and the dressing removed. It was found that the drainage tube had slipped out of sight. The wound was therefore opened and the missing tube searched for; it was discovered pressed between the bone and dura behind the motor region, in the region of the supramarginal gyrus as nearly as could be determined. It was removed, the wound cleaned of blood serum, iodoform dusted in, catgut drainage inserted, and the usual dressings applied.

At 9 A.M. his temperature was 101 and he was more quiet; this prescription was given:

℞ Ammonii bromidi. 2
Hydrarg. chlor. mit. 03

Misce et. ft. pulv. No. i. Sig: To be repeated every two hours until bowels move freely.

At 7 P.M. the temperature was 99; patient doing nicely and sitting up in bed.

May 16. Doing well. Temperature normal.

From this time on, progress was uninterrupted, the child not being confined to bed even an hour.

The second operation was made June 17, by Dr. Griffith, assisted by myself. The same steps were followed as on the opposite side, except that catgut drainage was used instead of rubber. The temperature never rose above 99.5, and the dressings were not removed for a week. Convalescence was rapid and uninterrupted.

The boy improved rapidly in his mental condition; in August my case record says: "This child can now walk in a natural gait. He is beginning to talk, saying, 'baby,' 'mama,' 'papa,' 'auntie,' "good boy,' 'O God!' etc. He can now feed himself to a limited extent; pays the greatest attention to what is going on around him, and is playing with toys, something hitherto unknown to him."

The last report in 1893 from this patient showed even more marked improvement; and he had not had any more spasms.

A letter of recent date (almost three years after operation) from his mother states: "My boy is getting along finely now. His health is good, though he is still quite nervous and does not talk well yet. He can say a great many words distinctly, and has become one of the smartest boys you ever saw but he will persist in running away from home. He does not have his nervous spells (convulsions) now. He understands fully everything that is done and said and sometimes will repeat long sentences I speak to him, then laugh and run. I think he could talk if he wished to. He can sing any song he hears once or twice. He is very fond of music and has learned how to play on the guitar. He will play and sing for hours at a time. Dr. Lanphear, I will ever be thankful for what you have done for him."

The most remarkable thing about this case was the tremendous elevation of temperature after the tube slipped beneath the bone below the motor region. This, accompanied by the marked motor excitement, it seems to me, goes to support the assertion of Horsley, that there is a thermotaxic center in the motor region. The rubber drainage tube was used merely as an experiment, because there was an unusual amount of oozing; the experiment will not be repeated. A few strands of catgut have proved amply sufficient for drainage in a large number of trephinings I have done, and possess the advantage of not having to be removed.

Case 2. Congenital Idiocy—Operation—Unexpected Improvement.—Henry B., of Cairo, Ill, age 6 years, patient of Dr. J. C. Sullivan, presented for operation Sept. 22, 1892. Family history neurotic, epilepsy and insanity being present in near relatives. General health excellent; no history of illness except meningitis at his third year. He presented all the signs of the genetous form of idiocy since his birth, and suffered from convulsive epilepsy for several years, the seizures increasing in severity and number until they were noted almost daily for some months prior to examination. My notes taken at the time read thus:

"Status Presens: Child well developed physically, except in the lower extremities; has all the symptoms of congenital agenesis of gray matter, viz., idiotic expression, prominent and brutal lips, irregular and decayed teeth, dribbling of saliva; he has the habit of sitting alone and swaying back and forth with a crooning noise, quite frequently throwing himself back on the pillow, screaming or moaning, tossing his head from side to side as if in pain; mental condition a perfect blank. The mother states that the child has never shown the slightest sign of intelligence, has never attempted to walk or to use his hands except automatically, has never tried to say a word, or appeared to notice anything that is said to him nor to pay attention to tones; at times she even thought him deaf because of his inattention to sounds. He has to have his food masticated and put far back into his mouth, as he has never learned to chew, and sometimes can scarcely swallow food, even liquids. He lies for hours, sometimes simply whining to himself or moaning. He becomes fretful when hungry, but is generally good-natured when kept well-fed."

The mother was told that this was a case that presented *absolutely no hope* from operation, as it was a variety that had never been operated upon so far as I could learn; and one that might possibly prove fatal. It was explained to her that there was the barest possibility that the irritation set up by the operation might produce a trifle of improvement, and she decided to take the chance; consequently the child was prepared in the usual manner for operation.

September 22. I performed craniotomy assisted by Drs. Thrush and Maxson, on the left side of head; the skull was very thick; the dura bulged strongly into the opening, pulseless, but upon enlarging the trephine hole to the usual dimensions, pulsation was established. In this case I opened the dura; decided paleness of the brain, and shallow sulci were noticed. Dura and scalp were closed with catgut and the patient put to bed in good shape.

September 23. Little shock was present; patient slept well; he was restless in the early morning, but food was given him, after which his actions were the same as if no operation had been made. Temperature 99.5.

On October 5. Operation made on right side of head. Bone greatly thickened but soft, was removed to the extent of 2 by 4½ inches. Dura not opened; no blood lost; duration of operation, twenty-eight minutes.

October 6. No shock; resting quietly; temperature 99; doing well; acting as usual.

October 7. No bad symptoms, restless manner entirely gone; has not cried once since operation.

October 17. Discharged from hospital.

December 26. Mother wrote that "Henry is improving in general condition; spasms are very infrequent and not severe, and he is beginning to pay attention to what is said to him, and particularly as to the tone of voice. When spoken to crossly he cries as would a baby six or eight months of age. He is learning to play with toys, and seems to take an interest in some things that are going on about him."

March 22, 1893, the mother wrote: "Henry seems altogether different. He has lost the restless way he had before the operation. He seems contented and satisfied everywhere. His feet are filling out, and he is getting a little use of his legs. His flesh is firmer and more solid. When he is hungry he hollers, 'Eat, eat, eat,' and, Doctor, his ways are all so much like a 1 year old baby's. He tries to climb up by chairs and stand on his feet, and I notice that if he happens to fall when climbing up, he is careful to hold his head and try and not fall again. He does not put his hands to his ears and head as he did before the operation. He gets amused with playthings and seems to enjoy himself. He seems to grow stronger in every way, but does not improve about walking. Still, he wants to hold to everything that he can reach. He eats heartily and sleeps well. His arms and body seem to be very strong, and his lower limbs are improving also. If they were only strong, I think he would walk soon. The way I first noticed his flesh was getting more solid was when he would kiss me, he would press his cheek against my face and it felt so much harder than before you ever saw him, so I felt of his arms and legs, and I know that he is gaining in flesh.

"Well, Doctor, I have been asked more questions about him since his operation; it seems to be a miracle the way he has improved, so everybody says who sees him. He blows his lips like a child just learning to talk. He can say four words right plainly, and he often does what I tell him to do and seems to understand me. I can say God bless you, and hope that some day we can send you money."

Dr. Sullivan recently informed me that progress is still satisfactory in this case—decidedly far more change than he ever expected to see; and that the present condition is certainly much better than could possibly have resulted from mere educational efforts.

This was a typical case of congenital idiocy, and as pronounced as any that has ever come under my observation; yet if the reports can be regarded as true, the amount of development since operation has been more phenomenal than that of any case that has ever been reported; which leads to the conclusion that operation is of some benefit in cases of congenital as well as in microcephalic idiocy. It does not seem to me that simply the increased efforts to teach the child could account for such marked changes; certainly the craniotomy was responsible for checking the epileptic paroxysms which were such a distressing element in this case.

Case 3. Epileptic Idiocy—Removal of Angioma—Some Improvement (Temporary).—Roy L., of Independence, Kan., age 12 years, was sent to me Nov. 29, 1892, by Dr. A. McCully. He was well developed; general health, good, and in excellent bodily condition. As a baby he was excessively nervous, but otherwise well, and was unusually intelligent up to the age of 3½ years when he began to have "night terrors," and a few months later developed epilepsy. Since then his mental development was very slow. Examination showed patient to be suffering from epileptic idiocy (the idiocy being of high grade); his language was fairly good, though sharp and quick, and only the most infantile forms of expression were used. His right side was far less developed than his left, and the spasms were always on the right side of the body. He had convulsions very frequently at night, and once in four to six weeks had a hard convulsion in the daytime, the diurnal attack being upon both sides of the body. He had to be watched constantly because of a developing viciousness. He could intimate his desire to micturate and defecate, but could not unbutton his clothes. He had absolutely no idea of right or wrong, the moral sense being totally absent. He played with the usual toys, was passionately fond of music and could readily learn to whistle a tune. Operation was strongly advised, for the cure of epilepsy, but with little encouragement as to mental improvement.

On December 1, I made the usual operation. With the gouge a cut was made through the skull to the dura just at the margin of hair on forehead, then the opening extended over the frontal and motor regions about two inches wide and four inches long. Over the leg and part of the arm center there was found an angioma measuring about one and one-half inches across. This was excised with much bleeding as the veins in the dura were almost varicose in size, and had to be ligated with catgut. The dura was sewed with catgut, iodoform put in, catgut drainage inserted, catgut sutures in the scalp, and the usual dressings applied. Duration of operation, one hour and ten minutes. In the evening he was resting well; temperature 99.5 and no evidence of spasms. Recovery from the operation was speedy and uneventful. He had a convulsion December 5, but no more up to the time of his discharge on Dec. 21, 1892.

May 10, 1893, Dr. McCully informed me that reports from the patient indicated much improvement in the mental condition. Language was being acquired with marked rapidity. Education was already begun with gratifying success, and there had been no return of convulsions since discharge from hospital. But unfortunately the boy could not be sent to Wilber's School for the Feeble-Minded, at Kalamazoo, Mich., as I advised; instead he was placed in the Kansas Insane Asylum at Osawatomie. The Superintendent, Dr. L. F. Wentworth, lately wrote: "He now has frequent attacks of epilepsy; many of his seizures are very severe and the number sometimes reaches as high as six, eight, ten, twelve or even fifteen in a day. His mind is therefore weak and childish and there has been no improvement in this particular since he came to the institution."

This was a typical case of idiocy due to convulsive seizures, I believe, and may be taken as an illustrative case of what might be accomplished by operative procedures in cases of suitable character; I am sure that the general epilepsy which caused the mental deterioration might have been prevented by earlier recognition and operation at a time prior to such marked impress upon the whole brain. It is a case which emphasizes the absolute necessity of early operation in Jacksonian epilepsy. Of course no man can make a diagnosis of angioma of the dura before trephining, so that in a measure such operations are exploratory; but none the less indicated.

Case 4. Traumatic Epilepsy—Operation—Death.—Jay B., of Guthrie, Okla., age 6 years. Family history and previous health excellent. Up to the age of 3 years he was in good health and as bright as children usually are. He then fell down a full flight of stairs and was picked up unconscious. The physicians called did not think the skull fractured, and prescribed a placebo. The unconscious condition continued for forty-eight hours. Upon return of consciousness the baby had a convulsive seizure like epilepsy and seemed "dazed." After this time convulsive epilepsy manifested itself by almost daily spasms and by mental deterioration. At the time of examination, Feb. 12, 1893, a condition of idiocy was found present; no speech, no attention to what was said or done, restlessness pronounced and spasms frequent, one occurring during examination. Upon the head over the motor region, there was a great prominence with roughened margin of old fracture apparent through the scalp. Operation was advised. With the assistance of Drs. Maxton and Truex, on February 15 I removed a button of bone with the trephine, and found the skull to be one-half inch in thickness just behind the parietal eminence. In front of this there was a depression with very fine fibrous tissue overlying the dura, with the thickened and roughened margin of the old fracture sticking up at its edge. With a Hoy's saw and chisel the protruding mass of bone was removed, as shown by the accompanying specimen:

There were two large sharp osteophytes projecting inward more than a half inch, removal of which caused sharp hemorrhage for a moment. The adhesion between the roughened, depressed bone and the dura was very firm. After removal of the bone the dura was opened and the brain found apparently normal in appearance and consistency, so the dura was quickly closed and the operation brought to an end. This was especially necessary as the child came near dying upon the table from some unexplainable cause—possibly from shock. In the evening the patient was resting easily; no convulsions; temperature 100; some shock, but apparently not severe.

February 16. Patient passed a quiet day, eating well and sleeping soundly; no convulsions during day.

February 17. In the early morning the child gave a scream, went into a most extraordinarily severe convulsion, ceased breathing, and died.

The post-mortem revealed no reason for the death of the child, and it is hard to account for the fatal termination. There was, as already stated, complete recovery from shock to all external appearances, and at midnight the patient was reported as out of danger. The house surgeon, who was present at the time of death, regards the fatal ending as simply asphyxia from the prolonged continuation of the tonic spasms of the muscles of respiration during the convulsive seizure.

This was a case that should have given excellent results, and I should not hesitate to advise operation in every similar one. The size of the piece removed may seem extraordinary to those unacquainted with

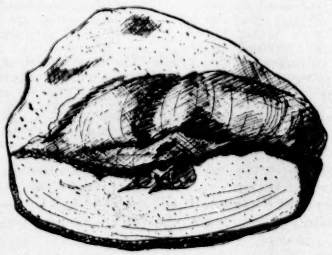

Figure showing shape of piece removed and space in center. Actual size. Thickened and depressed bone; roughened and thinned bone, and small osteophytes; adhesions.

work upon the head, but I have frequently removed pieces of even larger size than the one here shown, without fatal termination. I am inclined to believe that the house surgeon is correct in his opinion as to the cause of death.

Case 5.—Hydrocephalic Idiocy—Operation—Mental Improvement.—Lydia W., age 4½ years, Kansas City, Mo.; had always been healthy excepting the head trouble, though rather weak and anemic. She was apparently normal at birth and until the fifth month was not unlike other children although her head was regarded as rather large and fontanelles had shown no signs of closing. About the end of the fifth month she began having slight spasms, the head drawing to the left; soon afterward her head began increasing in size rapidly and she soon had well-defined hydrocephalus, from which she became totally idiotic; she had severe convulsions occasionally, and from five to ten light ones daily. Examination showed a head twenty-two and one-half inches in circumference and sixteen inches from ear to ear. She had marked protrusion of the eyes and some strabismus. At the time of examination the head was hard and the sutures closed, though for long they remained widely separated and projecting as ridges beneath the scalp. Operation Nov. 28, 1891, after careful preliminary treatment. Scalp opened by large horseshoe flap over left side; button removed with trephine; skull found eburnated but not more than one-thirty-second of an inch in thickness. The opening was enlarged to about one and one-half inches by three inches. The dura was thin and translucent, showing a large amount of fluid below, but no fluid was withdrawn; the scalp was stitched back into position and the wound closed. Little shock. Duration of operation twenty-six minutes. In the evening the patient was resting well and smiling; had been very quiet during the day and slept some. No vomiting. Temperature 100 degrees. On November 29 the patient was in good condition, eating as usual. Temperature 99. November 30 she was in as good shape as before the operation. Temperature normal. On December 6 the dressings were removed and healing by primary union found. A hollow needle was thrust through the scalp and dura and three ounces of serum removed; antiseptic dressings were then applied. A slight convulsion was noted afterward. December 10 the puncture was repeated. No convulsions were noticed, but there was some continuous leakage after withdrawal of the needle. On December 16 more fluid was withdrawn, though constant drainage had necessitated changing dressings. December 20 three and one-half ounces of serum were removed and one-half ounce of iodoform emulsion (10 per cent.) previously sterilized, injected. A slight convulsion followed. January 16, the patient was rapidly improving. Withdrawal of fluid and injections were repeated.

The people now disappeared and the case was never seen again; but friends of the family recently reported marked improvement in the mental condition—they called it a "cure," the pressure symptoms, convulsions, etc., having disappeared. The mental condition is said to be about like that of a child of 3 years.

Case 6.—Inflammatory Idiocy—Operation—Death.—Nicholas L., of Selina, Texas, age 4½ years, came under my observation March 6, 1892. Family history was excellent. The health of the child was good until the age of eighteen months, at which time he was as bright as any baby of that age and was learning to talk. An attack of meningitis occurred at this period of his life, presenting the typical features of acute inflammation of the meninges. It was followed by complete loss of all intelligence, and the child remained a perfect idiot until date of examination. After securing the history and making a careful examination, operation was advised against; but the parents insisting, the experiment was made. A very large piece of skull was removed from over the motor area, extending forward into the frontal region. There was great thickness of the dura, and upon incision a cloudy infiltrate was noted in the pia. Upon attempting to raise the membrane from the surface of the brain, adhesions were found everywhere over the frontal convolutions, but not in the superior parietal ones; hence the impairment of intelligence, but non-involvement of the motor functions. The adhesions included the speech centers as well as the convolutions situated more anteriorly. As nothing could be done to secure improvement in this case, the dura was closed with catgut and the scalp united without drainage, there being no hemorrhage of consequence.

Death fortunately followed two days later from meningitis. I characterize the fatal termination as "fortunate," because the operation certainly would not have done any good. It is possible that some cases of less severe degree might be benefited from breaking up the adhesions; but I must strongly advise against operation in any case known to be of inflammatory origin. I have thought it best to report my fatal cases lest it might be inferred that there is but trifling danger. In twelve operations for idiocy I have lost three patients—a mortality of 25 per cent. My first fatal result was due to the use of the chisel and to the fact that I operated upon both sides of the head at one operation—a thing I would not do now. This case is reported in full in the Kansas City *Medical Index* of February, 1893.

Aside from the case of Nicholas L. just reported, my operations have been limited to microcephalic, traumatic, congenital and hydrocephalic classes; the remaining cases are as yet too recent to permit legitimate conclusions to be drawn.

CONCLUSIONS.

From a thorough study of the literature of the subject and careful observation of my own cases, (which certainly have not given as good results as Lannelongue's reports led me to expect) I have reached this conclusion: the field is a limited one

yet operable cases are so very numerous, the mortality so low, the future of every case so barren of hope without operation, that I can not but believe we are justified in still continuing the experiment. But we should make it an invariable rule to carefully explain to the parents that the operation is a purely experimental one, point out the dangers to be encountered, very plainly state that the results thus far observed are not sufficiently flattering to warrant us in recommending operation, and that we can promise absolutely nothing except that the mental condition can not be made worse. If in the face of these statements the parents insist on having the operation done, we are certainly justified in undertaking the work in the most careful manner possible, to give the poor unfortunate the one slight chance of relief from an otherwise impenetrable darkness.

ORIGINAL ARTICLES.

CLINICAL REPORT OF THE PAST TWO YEARS' WORK, AT THE ROCHESTER STATE HOSPITAL FOR THE INSANE.

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ROCHESTER, N. Y.

Much of valuable clinical material is incident to every hospital year, and would seemingly be fitly gathered and rendered available for study and comparison with other hospitals of its class, as well as by physicians generally. As a lengthy list of cases would be tedious, we would frame a review of the two years' work, by touching upon those topics and cases which rise above the level of the daily routine, so familiar to us all. First, we would add some explanatory comments upon the clinical information, designated by the statistical tables of our report. Every hospital report has accompanying it, a list of statistical tables. As every official doubtless knows, this information is necessarily very defective.

1. *The Recoveries.*—Dr. A. A. Christian, of the Pontiac Asylum in an article (*American Lancet*, 1894, p. 161) analyzes with great pains a series of cases to show that a large number of so-called "recoveries" speedily relapse, and are more or less recurrent in character. That another proportion is not fully recovered, as shown by the test of ability to meet their home duties. He finds, after rigidly excluding such cases, only about 17 per cent. of true recoveries to admissions, in a considerable number of cases studied with painstaking care. Dr. Burr, Superintendent of the same hospital, in 1893 urged this same matter before the Association of Superintendents. Indeed, Earle's book on "The Curability of Insanity" covered a considerable part of the same ground some years ago.

Dr. Burr urges the formation of tables which shall be more accurate; but if by accuracy is understood the following of the case for five years after dismissal, it would seem to be somewhat impracticable, approximations being all that are possible any way. Tables call for designation of cases as recovered or not, *at the time of dismissal.* Public reports, moreover, have to be made regularly, and one can not wait years before making a diagnosis for them. The central idea of most value is, that the decision "recovered" or "not" is in each and every case *a matter of judgment*, and that there is no way of having it otherwise. That the person making the table can include doubtful cases as "recovered," or call some recovered whom others of equally good judgment would exclude is true. It is, however, possible to draw up some lines, forming a basis of judgment, which shall be used by all making such judgments, and therefore a common standard be secured. This is the aim as I take it, of the resolutions adopted by the Psychological Association. The personal quality of painstaking judgment in the one making the decision, and a common standard seem to be what are required. To follow patients, however, after leaving here for all parts of the State seems hardly practicable, and most of them have no friends with sufficient judgment to make an accurate report.

Aside from any "judgments," however, our total of curable cases admitted (which as Dr. Chapin suggests in his late report would be those selected by a general hospital in its estimate of results) is at a close approximation and excluding inebriates, about 266 out of a total of 621 insane admitted. This, however, leaves out of account chronic mania, and chronic melancholia, as well as the senile degenerations, paranoia, paresis and others. But these cases designated as chronic, (over one year's duration) occasionally recover. Adding these to our list, then, we have a total of 397 out of 621, to be considered upon admission as recoverable cases; leaving 214 or 34 per cent. who would be considered incurable usually on admission. Of these 397, some are recurrent cases. It might be said in general, then, that 35 per cent. of the cases admitted to this hospital are clearly incurable at the time of admission. A personal canvass of each case, however, reveals that most of the so-called chronic cases are also practicably incurable, and therefore 50 per cent. would be more near the true figure.

A caution is needed here; by "curable" we do not mean *treatable.* General paretics and others need treatment. Probably from 70 to 80 per cent. of cases need treatment, slight or great, upon their admission, although later they may drift into a chronic and stationary state.

2. *Age of Admission.*—Sinkler, Harriet Alexander, C. K. Mills, Sarah Weldt and others, have in the past two years had their interest excited, and have gathered some cases of insanity under 10 years of age. It is admittedly, however, rare and tends toward epilepsy or defectiveness. The great tendency of insanity is to wait toward the decline of life. As if forsooth, the impetus of natural endowment or constitution carried a man past the most vigorous time, only to be caught as the powers of life naturally begin to decline. The average age on admission here of over three thousand cases, is approximately 38 years. The average of cases coming into this asylum, then, are at what may be called the beginning of the decline of life.

3. *Causes.*—In our table of the causes alleged by physicians and friends on admission, there is necessarily so much of error as to make it of little value. We do not know enough of the history to correct more than a few of these causes, and the examiners are apt to put down impromptu, that which has been the last stirring event, or most prominently suggestive or suggested by the relatives. This is copied in by us,

only correcting it as our knowledge will occasionally allow. But, aside from all this, it is to be remembered that it is rare that *one cause alone* is responsible for the disease; and moreover that a clear distinction as possible is needed between predisposing and exciting causes. For this period we have carefully considered these causes, and have tried to classify them so as to suggest prominent and leading causal factors.

We firmly believe that *heredity* is the chief predisposing cause. Heredity must needs have no narrow sense, however. It must be broadened out so that it means both, "if the patient is peculiar, eccentric or partly demented, and the son goes to the asylum an acute raving maniac and, on the other hand, if the parent be a raving maniac, and the son have only the quiet unnoted feebleness of mind. But in all statistical tables neither of these cases would find any recognition, nor are many others of indirect heredity recognized at all." These tables of heredity only recognize insanity in a near relative, so gross as to be well known. Indeed a large number even of these are denied to us.

Recognizing an inherited or inherent brain and nerve instability as the predisposing cause, then we feel that it must almost necessarily be present to allow for other causes to act. Probably this is the most important topic in our list. It would seem, in looking about in the world, that you could sum up and pile all of the other causes on one man and he would not become insane because he had *not* this inherent instability. Without being able to define this most essential element in the cellular nervous structure, we would yet say that it is to an extent recognizable in the same way as is the tendency to consumption; in the consideration of which it is fully as manifest that some men will go through all of the causes and never have the disease, consumption. These latent, inherent predispositions of the body are hard to define, even with the use of modern terminology; yet need not be therefore denied. But heredity of the indirect though real form, can not be reduced to statistics. Of direct heredity, we find 84 men and 58 women, out of a total admission of 374 men and 247 women. This is probably much too low even for the direct form; but incomplete information is not preventable.

4. *Forms of Insanity.*—It is seemingly very important to have a table of diagnosis of the forms of insanity; but a close thought would reveal that it is really, however, not so important as it is to have *uniform methods* of naming the form among different hospitals. But we doubt if any two hospitals for the insane in the United States have exactly the same list of names. The distinctions between the different forms, even if made by experts, being in many cases transitory or unessential, it is the broad types which the far-seeing alienist wants; not particular names. There is a type of "general paresis," and particular cases conform with more or less closeness to it or lean over toward other types. There is the type, "senile dementia," and special cases conform with more or less closeness to this type, or vary toward the paretic or apoplectic type. There is the type, "acute mania;" and only a few cases adhere closely to it, many having a quite distant approximation, while some are on the border line toward melancholia or senile dementia; and so on through the whole list. The sharp lines drawn are all in our imaginations. They are arbitrary. The cases are not fenced off into pens, as we would fence a drove of animals, but are scattered over the whole field, and each may imagine his own fences arbitrarily. However, one set of boundary lines may be far better than another, and we should, as far as possible, select broad fundamental differences. For example, youthful cases are apt to approximate the defective or feeble-minded class; having superadded, variable and vacillating exacerbations, upon a gradually increasing mental trouble. This is a far more fundamental distinction than is the transitory and varying maniacal or melancholic behavior of any particular time. "Pubescent insanity or developmental insanity" are names we have used to designate these cases; names more true than those of mania or melancholia.

The distinctions, "acute" and "chronic," are only arbitrary, and are by some discarded altogether. To call all cases under one year's duration acute, is a common method. If some committee could be appointed with authority to enforce the use of some list of names, we all ought probably to sink our preferences in favor of uniformity. Of the acute manias we have made two classes; the acute disease which rises to a climax like a fever, with its typical excited incoherent speech and conduct. A second class might be probably called sub-acute; it includes the exacerbations of mildly affected cases; very slowly progressing cases approximating chronic, yet not over one year's duration as reported by relatives and having no acute rise as far as known. Of these two forms the former (the only true acute mania), we have in a total of 621 admissions only 54 cases as shown by our tabular analysis. Moreover, even of these 54, only about 20 were of the extreme maniacal type, with flushed face, trembling incoherent speech, etc., approximating the type, "acute delirium." Adding to these the 130 cases of *acute* melancholia, and we have as approximately the sum total, 163 cases in 621, in which insanity was distinctly an acute disease, rising to a climax, and unassociated with any gross brain lesions, like those of atheroma, paresis, senile dementia, etc.

"Syphilitic dementia" designates the dementia produced by syphilis. If a mania or melancholia is accompanied by syphilis it goes among the other manias, and syphilis is put down as a cause. This is due to the predominating tendency toward dementia as a sequel to syphilis.

"Choreic dementia" is subdivided into the dementia of the adult progressive chorea and the "juvenile" form, according to the very different characters of chorea producing the trouble.

The melancholias are subdivided into the agitated and stuporous forms, to meet the usual distinctions made as to behavior.

"Puerperal" is put down among the list of causes, and the manias so produced are included among other manias; this seeming to be the most just and accurate way.

5. *The Causes of Death.*—These cause some perplexity. It would seem best to have the immediate and fundamental causes given separately. The word "exhaustion," perhaps, causes the most question. Exhaustion usually means tire from activity; in insanity it frequently does not. For example, in general paresis or senile dementia, it means a gradual deprivation of central nerve power. The cortical impairments of these troubles easily suggest the cause. The substitution of the immediate for the fundamental cause

is avoided as much as possible. "Heart-failure" was, however, necessarily used in several instances; for example, one old man failing somewhat from senility, died suddenly and quietly in bed a half hour after eating a good supper. He seemed well, and as no autopsy was held, and atheroma did not seem prominent, "heart-failure" was designated as the cause.

"Acute periencephalitis" has been used to designate the cause of death in cases following H. C. Wood's designations. The five cases so named could be termed subacute meningitis doubtless, if we so wished. They seem to fall halfway between acute delirious mania (or the "acute delirium" of recent writers) and ordinary meningitis. No autopsies of these cases were secured. Among the total number of deaths of 131, we find that 40 are from pulmonary tuberculosis, and 39 from general paresis. Epilepsy claims 8, apoplexy 4, senile dementia 13 and brain disease 11.

6. *Occupations.*—The occupations are systematized and condensed on the fundamental lines of a probable leaning toward mental impairment, and do not well sustain the idea of brain strain or mental overwork as a factor in producing insanity. A preceding defectiveness is the most prominent element.

Leaving now the statistical tables, there are other subjects which have received especial study and consideration during the past two years. "Phthisis and its relation to insanity" was quite thoroughly looked up by Dr. Sarah L. Phelps. "Strychnin—the use of in inebriety," was made the subject of an experimental study. The general consideration of "Inebriety" as a curable disease was considered. "Hereditary chorea," and its relationships, and "Periodicity in insanity," were made subjects of articles. Of phthisis or pulmonary tuberculosis, Dr. S. L. Phelps, from analysis of evidence, concluded that there was no mysterious connection with insanity; that it produced no especial form of insanity, nor did insanity, except in the various *indirect* ways, produce the lung troubles. Confinement, inactivity, extremely careless habits of neglect, extreme neglect of all voluntary sanitary measures, predetermining toward tuberculosis, producing a somewhat larger proportion of cases than among the outside population, even if among selected people of the same ages. Looking over our record we find that we have had 40 deaths from tubercular disease of the lungs, during the past two years, out of a total of 131.

Dr. Channing recently (*Boston Medical Surgical Journal* July 19, 1894) assumes tuberculosis to be the cause of insanity quite definitely, following Clouston in his ideas of the disease, and asserting it to be about three times as prevalent in asylums as among the sane. Later study, however, it seems to me shows many corrective facts. The average age on admission to hospitals for the insane is here about 38 years. Statistics among the sane usually include all ages, of which the total adult population is but a fraction. Again, most cases of tuberculosis in asylums are among melancholiacs and dements, who sit inactively for months, and neglect, as far as they are personally concerned, nutrition and exercise, which are the two main preventives of the progress of tuberculosis. Sane people do not so neglect themselves. Again, the insane are careless as to cold-catching and exposure; the sane are not. The insane have a tendency toward sedentary life, as in most cases the sane do not.

Dr. Channing found the average number of deaths resulting from tuberculosis among the insane, to all deaths, to be about 16 per cent. which is about our average here. This is hardly, however, three times the proportion of deaths from tuberculosis outside, which for persons at adult age, say from 35 to 45, the average age of the insane seems to be nearly (perhaps a little over) 10 per cent. while for all ages it seems to be only about 5 per cent.

Of evidence of tuberculosis as the cause of insanity, we can add little that is new from this two years' record. In two cases of admission here, tuberculosis was present on admission, and progressed coincidently with acute typical mania, both dying in a few months. One was a case of a girl aged 18, who had been some five years previously treated here for a similar attack, and had quite fully recovered. Tuberculosis was in the family history. She failed rapidly, dying twenty-three days after admission. Another, an old lady, aged about 61, approximating somewhat the senile age, yet had an attack of quite typically acute maniacal behavior, the second one in her life, it leading on rapidly to death from pulmonary tuberculosis in the same manner as the preceding case, about six months after admission. Among the forty cases of deaths during this period these are the only two, however, suggesting in any way a causal connection, and we fail to see any distinct evidence, more than a coincident one, in these cases. Ordinarily these consumptives are quiet melancholiacs or dements. In the forty cases mentioned, twenty-six were melancholiacs and nine terminal dementias; one, chronic mania; one, mania a potu; one, morphinism. Only four cases were at all active ones.

General Paresis.—General paresis is a subject always calling forth peculiar interest. As will be seen, we have thirty-nine deaths from this trouble, this period; thirty-three men and six women. This is a large and important element in our death causation. More sad still is the fact that once diagnosed, treatment will only delay the fatal termination, never prevent it. It receives extended study, however, not so much in hope to cure, as to study its forms and causes and to secure such thorough knowledge as to prevent to some extent its invasion. The causation is still somewhat vague. Continued study only goes to show that though syphilis is considered the most powerful cause, that all intemperance and excess seem to help its onset. Too little attention, perhaps, is paid to the element of *predisposition* in this case. For it is evident upon a broad outlook that while the causes of paresis act upon an immense number of people, only a few of them develop the disease, general paresis. Lack of space prevents giving a synopsis of the thirty-nine cases.

Under general paresis it should be said that more and more cases have come to be included, which once went by other names. Senile cases of strong paretic form, also gross brain lesions of various kinds, which have tended to produce the same sluggish paretic state, and even to have considerable of the same progressive tendencies, tend to receive the name. We have not space to review the thirty-nine cases which during the past two years have proved their diagnosis by a rapid progression and death, but will mention a few summarized facts concerning them.

Of the thirty-nine deaths, thirty-three died in exhaustion, by which is meant a steady progressive failure, without other special bodily trouble. One

died from choking, one from meningitis, two died from convulsions of an apoplectic form, and one from a series of convulsions, simulating status epilepticus. One died with erysipelas.

Concerning convulsive seizures in general, it is to be said of the thirty-nine, that nine had at some time during the course of their trouble, convulsions of a decided character, while seven more had "spells" which approximated unconsciousness, with or without convulsive movements. Their average age on admission was 41 years; the average duration of their stay here was one and one-fourth years. To this duration, however, we would add the probable average duration of each case before being admitted to this hospital, of from one to two years.

Chorea.—Of chorea we have had examples of the varied forms; have had two cases in youth, (one aged 18, another 20) in which the mental weakness and confusion of mind was coincident with the chorea, seemed to be caused by it and receded with its recession. These we have designated as choreic insanity "juvenile," to differentiate it from the radically different adult form. We have had two more cases of the adult progressive chorea with choreic dementia, one of these giving a vague history of "hereditary chorea" form. We have had two marked cases of the so-called "post-hemiplegic chorea," also one case of most extreme chorea with imbecility.

There was also one case of a sudden outburst of chorea of most extreme form, coming on within two or three hours at the beginning of a relapse of typhoid fever. The mental state in this latter case was a hysterical delirium, culminating in this choreic attack with quite complete helplessness. This case, a young girl of about 20, recovered very perfectly.

The most striking case of chorea was one of acute form, producing death, coming on about a year after childbirth. This case is published elsewhere, (*International Medical Magazine*, February, 1895) as also a case of prolonged lethargy of nine months duration, and one of adult bilateral athetosis, idiopathic in character.

Paralysis Agitans.—Two cases have been admitted during the two years just past; one a woman aged 70, having dementia of the senile, weak, childish form, without defined delusion. The other, a man of nearly the same age, also demented, with delusive ideas feeble in character. It is doubtful if a special kind of insanity should be so named; it is probably enough to record paralysis agitans as the cause, with the mental reservation that it is perhaps merely the concomitant element.

Jacksonian Epilepsy.—Jacksonian epilepsy, in the sense in which is meant an epilepsy with some localizing motor spasms, is rare in the advanced cases presented here. One case in which epilepsy followed a gross brain injury of seventeen years ago presented itself. This man, in spite of a trephining, had been epileptic for some seventeen years; had been at times somewhat actively deranged mentally, but usually only when he drank, which he did at every chance. He recently, while here, began having fits more severely and showed more of mental derangement, and after some of them there remained a numb feeling, a lack of power in one hand, with some occasional involuntary motions of the fingers. These motor symptoms in a general way, corresponded with the locality of the scar upon the opposite side of the head. Dr. Charles Mayo on consultation agreed to operate. Before consent of relatives was obtained, however, patient went into a status-epilepticus, out of which he was brought by the use of nitro-glycerin. Was then in a semi-delirious condition. Operation was successful; scar was found to be not all bony, and directly under the scar was a cyst holding about two ounces of fluid. Patient had one fit the next day, but in the course of about two weeks recovered his ordinary mental state, and eloped from this place reaching home safely.

Gross Brain Injury.—A man was admitted here, in 1893, with a large irregular opening of nearly two square inches in the skull, above the inner corner of the right eye. This had been produced by a supposed intentional suicide, with a gun. The brain lay exposed and pulsating to the view, though covered by a coating of purulent deposit. A probe reached indefinitely back along the surface of the brain; brain matter to the extent of a teaspoonful or more was said to have exuded, and was removed after the accident. He was obliged to keep his face forward, for the drainage of what was practically a large open abscess cavity. He began to have some fever, went to bed, seemed to be failing, and his people were sent for on the strength of a bad prognosis. They took him home, however, and a month later sent for his discharge, on the plea that he wanted to do some business. He had, while here, no motor symptoms or paralysis, and was only a case of ordinary mild melancholia. If accurate data could have been had as to amount and exact location of the brain matter removed, the case would have been of considerable value.

Acute Alcoholic Dementia.—This is the designation of one of our cases, and would be of one more, except that the second one came upon an inebriate warrant. As the term might be perhaps misleading, I give the case briefly: a man, aged 50, was here several months as an ordinary inebriate. He went home on trial, and a few months later was committed as insane. He was then found to be completely demented, and in a condition closely resembling general paresis. His face was blank and smooth in the extreme; his memory almost gone, talked fairly free and very peculiar; polite in form, although his ideas were mostly imaginary. Speech was hesitating but not much slurred. In this state he has continued for the eight months which have since elapsed. The causation in this case was acute, and the result is quite different from that of a case of chronic alcoholic poisoning, and therefore we have given the distinguishing name.

Primary Dementia.—This is used to signify a number of cases in which there is a slow growing demented condition, such as is produced by alcohol without any especial mania or melancholia. In some cases, however, there seems to be no alcoholic history or other like causation upon which to base the designation. To these we have given the name, "primary dementia" in that we have considered them too different to come truly under any one of the other designations. These cases are usually of adult life, and could not, therefore, as would be otherwise quite possible, combine with the pubescent cases. These could be forced into other classes by distribution, but it would seem could not be done without obliterating important distinctions.

Use of Strychnin in Inebriety.—Among other subjects which have received special study during the past two years, the preventive action of strychnin

upon inebriety was studied by an experimental trial in twenty-five cases, in the firm belief that this was the active element in Keeley's cases. The results were published. Though averse to having any seeming connection with Keeley's methods, yet of its possessing an action above any suggestive one, there seems to me to be no doubt. That the suggestive element must be relied on to carry on the effect, however, there is also not much doubt, as the drug action is only a temporary one. That it can be asserted to be logically the best drug for the purpose is, however, in my opinion very probable.

Our opinion as to the value of hypodermic injections of strychnin in combating the craving for alcohol, was practically re-affirmed two years later by Dr. Breed, (*Philadelphia Medical News*, April 7, 1894) who outlines in a similar manner its direct value above that of a suggestive one, in annulling the appetite of the inebriate, "and that without the least effort on his part." Its strong tonic action is also dwelt upon. Dr. Breed, however, was a little too near to the first enthusiasm of the immediate effect of the hypodermics to judge conservatively of their permanent value. He assumes inferentially, moreover, that the drug effect is a permanent one which seems to me a great error. Suggestions, fear and moral effects must keep up the waning influence of the drug. (I have often wondered if the administration of the drug could be kept up either in small doses or in an intermittent way, so as to insure permanent effect.) Dr. Breed also speaks of the hypodermics of strychnin as if new, whereas during the past two years it has been frequently mentioned, and our own idea two years ago was gotten partly from the references to the records of Russian and Italian physicians, the experience of whom I believe goes back as far as 1880, and from whom I suspect Keeley to have adopted and developed the idea. Partly also my incentive was from Dr. Gray, who claimed to be using it in his Sanitarium at La Porte, Indiana, and whose methods rather than Keeley's were the ones that I adopted. We used here the nitrate of strychnin, especially prepared by Eli Lilly, for such treatment.

Partial or modified responsibility. This somewhat philosophical subject, running out on theoretical grounds, yet being of far-reaching practical value, the "partial" or "modified" responsibility of some people, was strongly advocated as needing a recognized standing in an article before the State Medical Society this year. The connection of Bright's disease with insanity, strongly and ably advocated by E. D. Bondurant of the Tuscaloosa Asylum, stimulated us to an extra effort to see if we could justly admit ourselves to have overlooked such fact. Aside from the consideration of *any* theory of connection, however, we could not find any such facts of albuminuria and casts as he detailed. We found even after some selection of cases, only about 13 per cent. of cases; and probably we would average not over 5 per cent. of the admissions; whereas he found about 85 per cent. in consecutive examinations, some 50 per cent. having *both* albumin and casts. Drs. Bennett, Tuttle, Christian, Amelia Gilmore, Babcock, Norris and others have all studied the subject with varying results. Landon Carter Gray's recent article also falls in the same line.

Treatment of Choking.—In connection with Training School work, there has originated a peculiarly useful mode of treatment in cases of choking which, so far as I have noted, is not mentioned in any textbook on nursing. In one case of choking by meat, when the finger could not reach the morsel, and the man was becoming comatose before my eyes, it suddenly occurred to me to reach with thumb and finger deep down behind the sternum, to pinch the windpipe and strip it upward; thus carrying the contents up into the throat. It was easily and promptly executed; the meat taken from the mouth, after which three minutes of artificial respiration brought him to life. So simple and fairly sure is this procedure that I should now think that one of our nurses was neglectful of duty who did not try it in any similar case.

Hypodermics of Nitro-Glycerin in Epilepsy.—In last year's literature several references were found as to the value of hypodermics of nitro-glycerin in checking the convulsions of epilepsy. Upon having a case of status-epilepticus in a young girl, in whom a comatose condition had been present for over twenty-four hours, in whom the temperature had reached 104 degrees and who was considered as surely going to die, the idea of trying these hypodermics was considered. The very first one was followed by a reviving effect, and a continuation brought her from the coma and fever to her usual condition in, approximately, about four days. She has been as usual since. This seems to me a quite noteworthy and unexpected effect. The hypodermics were tried later in the case preceding trephining, as outlined elsewhere, and with good results. This is the last case of status-epilepticus which we have had here. We have tried the remedy on the mental confusion of an epileptic state with somewhat of temporary benefit, and are trying it now on various other epileptic temporary conditions that come up from time to time. Its permanent benefit must as yet be considered very doubtful.

Massage.—This was first introduced systematically last year. The very first case taken by the members of the class in massage, a case of "post-operative" exhaustion or shock, progressed so steadily and logically toward health that it acted as a great incentive to the class to continued work. The case was one of confusional state of mild melancholia, and the Wier-Mitchell treatment of rest, massage and electricity was very effectual.

Contagious diseases have been very rare in the hospital. During the last two years, however, we had several cases of measles and several of mumps; in all but two cases, however, among the employes. We had three cases of typhoid fever, all sent to us from the cities. We had no dysentery except in isolated cases during that period.

CHRONIC INEBRIETY—FROM A MEDICO-LEGAL POINT OF VIEW.

Read before the American Association for the Study and Cure of Inebriety, in New York City.

BY T. D. CROTHERS, M.D.

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The chronic inebriate appears most frequently in the lower courts charged with crime against persons, and also minor grades of crime against property. He is commonly a continuous drinker, taking spirits daily, and to excess, when he has the means to procure it, and the conditions are favorable; or a periodic drinker with distinct drink paroxysms, at uncertain or definite free intervals. The paroxysms

subside usually from exhaustion, and begin again when a degree of restoration comes on. Such persons are more commonly laborers, mechanics, barkeepers, boatmen, hostlers, and others of servile occupations. A certain number have descended from higher levels of business and social life, and a certain percentage are wrecks from various disasters; but the larger proportion are degenerates from inheritance, and have never been able to rise above the present levels. In appearance an irregular shaped head, face and body are often prominent. Often they are of large coarse frame, or small irregularly developed bodies, with coarse, bushy, or thin, straggling hair, irregular projections or defects of the nose, mouth or eyes. The entire body seems to be stamped with signs of imperfect development and degeneration. Such persons begin to use spirits early in life and are usually intoxicated at or before puberty.

This drink impulse is often associated with dangerous sanitary conditions, with irregular, unhealthy living, sleeping in bed-rooms insufficiently lighted and ventilated, and living on bad, innutritious food, also in a bad mental atmosphere. Add to this the continual indulgence of all the impulses and passions, in surroundings full of the contagion of bad examples, and the result is inevitable. There is here a constant widening perversion from the natural standard of mental and physical health. Exhaustion and drinking of early life is followed by degeneration, which affects the entire organism. Ambition dies out except for the most selfish gratification. Criminality grows out of these surroundings as naturally as weeds spring up in a neglected garden. The evils they suffer from perpetuate themselves, and grow more and more rank. All effort to rise to better conditions of living and acting involve the exercise of powers which are either wanting, or are feebly developed, or early crushed out by the predominance of other elements. As criminals they always lack the boldness of experts; usually they are followers acting under the guidance of others, and are sneak thieves, petty swindlers, gamblers—ready to engage in any scheme that will furnish sources of gratification to their passions, without much danger or special labor. As inebriates, they drink insanely for a time, governed by circumstances and conditions. Some of these cases are reared in bar-rooms and the lowest circles of life, and have the marks of pronounced degeneration. Others come from the wealthy classes, or in those inheriting large amounts of property and have grown up without any fixed purpose in life. Not unfrequently they have squandered their patrimony, and been placed in positions where all efforts to help themselves have resulted in failures. They are ordinarily marked by a weak mind and unbalanced judgment, and suffer from neurosal and mental troubles, and are filled with delusions of oppression and wrong at the hands of others. Conscious that society is at war with them and its methods antagonize the full play of their passions, they accept the situation and never seek to change or vary the conditions. Finally, they rapidly become beggars, criminal paupers, robbing their relatives and friends; also lapsing into communists, full of all the small vices, ready at any moment to aid in crime, or take advantage of any weakness, licentious and drunken at all times, and resorting to the lowest devices to gratify their impulses. Syphilis and general degeneration are common—improvidence, fawning, and audacity are marked. In some cases they possess an apparent average or superior brain power, coupled with a defective moral force, and general want of control. They are more prominent as inebriates than as criminals, and often do criminal acts under cover of apparent drunkenness. This class are the skeletons haunting their friends continually for money and support, rarely committing noted crimes, but always in centers of low dissipation.

The second group are made up of persons who have been clerks, traveling men, peddlers, gamblers, and swindlers of all kinds. They are higher up than the last class, and possess a degree of activity which is evidence of more brain-power. Quack doctors, police, lawyers, defaulters, and patent swindlers are of this class. They frequently inherit an unbalanced organism and a distinct degenerative diathesis; with a family history of insanity, epilepsy, inebriety, syphilis, criminality, cancer and consumption.

Like the first class, they are largely the outgrowth of the surroundings, originating in bad sanitary and mental influences from early life. The worst phases of this class are seen on the frontier, as miners, speculators, and gamblers, or in business centers of large cities, as brokers, agents, and middle-men, who are ready, with any excitement or excuse, to defy law and order. As communists and railroad rioters they have attracted much attention for some time. Frequently they are filled with delusions of wealth and power, are superstitious of fate and chance, and alternate between hope and despair. Failure follows in nearly all circumstances of life, and is attributed to others, and the wrongs they suffer at their hands. While complaining bitterly of the dishonesty of others, they continue to cheat and drink in an aimless, impulsive way. They have appeared in the temperance work in great numbers, and have been noted as defaulters in coffee-house enterprises, and as lecturers recounting their experience, and soliciting help to build up again, etc. With a degree of sharpness and low cunning that is rarely obscured by drink, they have found the various temperance movements of the day a field for the fullest play of all their talents, which they are not slow to occupy. They are truthfully called the temperance tramps of the day. As inebriates they are noted for their marked periods of sobriety, and the unexpected, insane-like relapse, which seems to be partially under the control of the will. After the fullest gratification of the disordered impulses, they stop short and seem to recover. They commit crime in this impulsive, unreasoning way, confusing courts and juries as to the motive present. In asylums and in prisons they are always the most hopeful, and are sure to create sympathy, and gather about them friends which they sooner or later victimize.

In both of these groups the surroundings and predisposition to criminality and inebriety are about equally developed; sometimes one predominates over the other, and in some cases they exhibit much skill in concealing the one or the other; profound degeneration and suspension of the will and moral power is present in such cases. They never realize anything but the fullest gratification of the lower faculties as the ideal of life, and criminality and inebriety are the best means to this end. They suffer from neurosal disorders, such as exhaustion and a special degeneration of the nerve centers. Either from a non-development or a general perversion of functions

and structure, they are born both inebriates and criminals.

Such persons are usually marked in every community by their irregularities of living, and mental peculiarities, as well as physiognomy. They appear as inebriates in all grades of crime, and are seen in prisons, hospitals and work-houses, all over the world; and are frequently studied in courts of law and insane asylums, as types of all inebriates. Literally, they are all moral imbeciles, that drift up and down the world like ships without a rudder or compass.

They are committed for crime against both person and property, and constitute over 50 per cent. of all the inmates of prisons and jails. Not unfrequently they occupy places of trust in society, and when tempted fall precipitately, and puzzle experts and judges to determine between insanity and criminality, and the measure of responsibility.

The inheritance of disease is more marked in this class than others. Dr. Stevenson remarks: "There can be no question but that heredity exists in the mental as well as the physical world, and that the diminished stability of organism and perversion of physical function are transmitted with as much certainty as the germs of disease; that brain structures receive certain tendencies from inheritance, which bind it down or control its future, or that it has a certain capacity for impressions and energy of organism which goes with it always after."

This expresses clearly the doctrine of heredity which is now accepted as an established fact. The inebriety of this class is of the same order of neurosis as insanity, and depends upon some molecular change of cell and nerve tissues, which coming down from parent to child fixes the mental and physical character with certainty. In other words, it is a symptom of physical degeneration of the nerve centers, an outward expression of an inner condition of disease, always connected with degenerate undeveloped cell and nerve structures. All this is confirmed by clinical histories of numerous families where, for generations, the criminal insane and inebriate neurosis has developed in one or more of the family.

Such persons possess a distinct neurosis, which manifests itself either in inebriety, criminality, or pauperism; or, very commonly, two or more combined in one. This degeneration may not be tangible to any physical examination, but later, the autopsy and microscope often indicate distinct cell changes.

When a certificate of continuous and excessive use of spirits is ascertained, there is specific degeneration of both the brain and entire organism. If the history indicates a diseased ancestry, this degeneration is more pronounced. The direction of these defects will be toward imbecility and general paralysis. In one case a low type of conduct and reasoning will appear, and sharp reversion back to mere animal life are the prominent features. In the other, mental exaltation appears with delusions of power and capacity, beyond all ranges of reason and observation. The brain is disorganized and weakened. A progressive dissolution has begun which is apparent in the general depression and failure of all the mental activities. Such cases use spirits more uniformly, and are more stupid from a less quantity of drink and grow more incapable of work; muscular control of the body is lessened; the use of the hands and legs becomes feebler, memory fails, and ideas and judgment are faulty. Apathy and indifference to himself and surroundings, and no thought except to procure spirits are often prominent. Excitability and irritation occur in some cases and crime follows, which is usually impulsive, unreasoning. Assaults are committed on any one, both with or without provocation and no apparent realization of the act and its consequences are noticed.

The following are some common examples: a chronic inebriate of this class stumbled and fell on the street and was helped up by a stranger who jokingly alluded to his condition. He seized a stick and killed the stranger without a word or exclamation, and continued his walk down the street all unconscious of what he had done. Another man of this class shot a stranger who looked at him closely on the street, attracted by his staggering gait and manner. In a third case an inebriate killed his wife because she did not have dinner ready when he came in. These are common examples of chronic inebriates in a stage of dementia suffering from paroxysms of irritability and delirium. The dull apathetic cases are often involved in crime against property. They are stupid thieves, coarse bungling swindlers, and commit assaults and even murder when driven to it by circumstances. Seldom any premeditation is associated with crime they commit, and the same indifference is manifested as to the consequence of their acts.

When these demented cases develop symptoms of general paralysis, most commonly noted by mental exaltation and mild deliriums of strength and power, crimes against person are common. If against property it is from the suggestion and direction of others. Such cases become noted for their prominence in conversation and manner, and general recklessness of conduct. They drink at all times and are not often intoxicated or stupid from spirits, but are always impulsive and vociferous, never resenting insults by violence, and growing more and more egotistical. In the early stages they are politicians and reformers, and enthusiastic followers of every new movement that is revolutionary or lawless; later, they are senile egotists who boast of their influence and power. Often such persons are bigamists, and accessories to criminal acts, assisting and concealing crime and criminals. While such crime may show reason and cunning it will always lack in consistency and uniformity of conduct, and be noted by blunders and bad judgment in all their acts. The secretiveness of one stage of the criminal act, will break away into the most transparent expression of his purposes and motives in another. His denial of acts and explanations of suspicious conduct will be thoroughly imbecile and childish, and convey the real truth more accurately than confession of any kind. Statements of crime, either as witnesses or participants are of no value unless confirmed by other testimony. Some of these chronic inebriates manifest an unusual susceptibility to the personal influence of others. Particularly to some favorite bar-keeper who furnishes the spirits, or some woman along the same line of living, and but rarely for any one who antagonizes his mode of life and conduct. This is practically a hypnotic power along the lower levels, and on the plane of everyday life. But it varies widely in uncertainty and brevity. The hypnotic control of a chronic inebriate is very unstable, and while it may be used for the purpose of crime, can not be de-

pended on to conceal it. To make a man intoxicated and suggest crime to him is not unfrequent, but the commission of the act depends on a wide range of circumstances that may vary any moment; circumstances that the operator has no control over, and conditions that must be in harmony or the act will fail.

A saloon man sent an inebriate to set fire to the home of a temperance reformer. The flask of spirits to give courage for the act brought on a stupor, and after a short sleep, and confusion of mind he built a fire in the barn of the saloon-keeper by mistake. In another case an inebriate was urged to kill a certain man and partially intoxicated was led out where he could commit the act. He evidently became confused and began firing at every moving object, then when his victim appeared, confessed that he came to shoot him, and after an emotional period of weeping offered to kill the man who sent him on this errand. Often the statement is made by chronic inebriates, that persons have suggested crime and offered to reward them for the commission of such acts, but why they were not committed was not clear. In reality the inebriate mental condition is so uncertain that but a limited range of criminal acts can be committed only from the most favorable circumstances, especially crime by suggestion from outside sources.

The man who is apparently under the influence of some companion, who urges him to commit a criminal act fails because of some slight obstacle at the time or some sudden change in his mental condition. Such a case may go home and kill his wife or some other person on the slightest provocation, or commit some strange crime, without suggestion and from a passing impulse. The suggestion to have committed this crime any time before would have been unheeded and failed.

In reality the chronic and degenerate inebriate, while in some cases susceptible to suggestions of criminal acts, lacks reason and steadiness of purpose to carry them out. The confused brain is the center of conflicting impressions and rapidly physiologic changes that make it impossible for any fixed line of action to be pursued. Each glass of spirits increases the circulation of the blood in the brain for a brief time, then diminishes it. The exhilaration and rapid thinking of one period is followed by the depression and slow confused thought of another, and these follow each other so rapidly that it is almost impossible to follow any special line of conduct or carry out any particular idea. In certain cases confessions of criminal suggestions are made that are false. Crime is committed and the inebriate when sober is unable to explain why he should have acted thus. The thought that possibly some one urged him to do the act occurs. After a short time this becomes a conviction which increases with each repetition.

In one instance an inebriate who had shot his brother was questioned at the station house by a zealous officer, who suggested that he committed the crime under the direction of an enemy of the murdered man. He accepted this theory and confessed to an elaborate plot, in which all the details were described minutely. On the preliminary trial this story was elaborated, and accepted as true. Later, it was proved to be false in every particular. The prisoner had not seen the man who suggested the crime for many months, and at the time he was supposed to have instigated the crime was in a distant part of the State.

In the second case an inebriate who committed an assault which proved fatal, was told by his wife that she believed it was done at the bidding of a certain companion who had great influence over him. He accepted this and asserted it to be true, giving minute details. Later, it was ascertained to be false, and without any basis of reality. The statements of chronic inebriates of the causes and conditions of crimes which they have committed, are unreliable and untrustworthy unless confirmed by other testimony.

The possibility of committing capital crime at the suggestion and bidding of other persons is always open to grave doubts and should never be accepted as a fact unless established by very clear evidence. The statements of undue influence and suggestion of crime after the act by the criminal may be equally doubtful and should require the strongest proof before acceptance. In civil contracts and wills this question of suggestion is more frequently an issue. In wills the point raised is the undue influence of some interested party exercised when the man was intoxicated. Here, as in criminal acts, there is a wide range of possibilities and no general or uniform line of conduct which can be predicated. The enfeebled brain alternately exalted and depressed, always under a mask, and never able to appreciate its relations to the surroundings will act differently at different times. In one case such a man willed his property to his youngest son, and the next day to a daughter, then to the physician. In each case he declared he had no other wills and was, no doubt, honest in his convictions. It is extremely doubtful if any acts or disposition of property can be relied upon as rational, unless the act in itself is consistent and reasonable and just in its results to all concerned. A chronic inebriate disposed of a large property to many persons, and an issue was raised of his intoxication at the time of making the will. It was proved that the provisions of the will had been determined and mentioned to many persons long before, and in reality was simply the culmination of previous reason and judgment, that could not have been influenced by the intoxication at the time of signing the will.

The chronic inebriate not infrequently exhibits new and distinct personalities of thought and conduct. When drinking rapidly he may display emotional delirium of thought and conduct. At another time when using spirits regularly in excessive quantities, be very still and reserved, and show caution in conduct and speech. In the first period he may be loud and violent in his language but excessively cowardly, and the possibility of committing a capital crime at this time is very slight. In the second period the crime may be the sudden impulse of the moment, and never premeditated a moment in advance. In some persons, delusions of persecution, open or concealed, may be present and crime may follow as a sequence to this, but only from a rare combination of events. In other cases optical and aural delusions are the basic exciting causes. In some cases where after long continued intoxication voices are heard, some of which are threatening and insulting, sudden assaults are committed, the real causes of which may be forgotten. In a case of this kind a fatal assault was committed which was explained as self-defense at the time. The next day all recollection of this had faded away. In a second

case a fatal assault of a stranger on the street was explained by the criminal inebriate as self-defense. The victim came toward him with the most violent language and threats, telling him that he had a concealed knife which he would use and send him to hades. In the wild frenzy of fear the act was committed. The victim was quietly walking down the street, all unconscious when struck down. The criminal could not recall the reasons for this act a few hours later.

Optical delusions have been noted in some cases where suddenly the appearance of some man on the street would be interpreted as evidence of assault, and in defense the inebriate would attack him. Such cases are termed mistaken identity, and are settled as blunders and accidents. Some chronic inebriate will suddenly on the street have optical delusions, and conceive that the man who is passing him with his hand raised, is in the act of assaulting him, which he repels instantly, only to discover his mistake which he explains as mistaken identity. He may at this moment hear voices and have aural delusions as well as optical delusions; after the act he will have no clear recollection of what has occurred. *Many of the criminal acts of this class come from centers of infection*, such as a dog fight, a personal altercation, an accident, some apparent wrong, or injustice; railroad and other strikes, or any occasion in which intense excitement is developed seem to have a powerful influence over the alcoholized brain. Crime under these circumstance is fitful, unreasoning and largely accidental, and of an insane transitory type. Property is destroyed, assaults are committed and strange unaccountable wrongs are enacted, associated with a degree of frenzy that dies away quickly before any superior force.

The chronic inebriate thrown into centers of excitement, drinks freely and is soon narcotized and unfit for any physical or mental activity. On recovery from the stupor in centers of similar excitement, he becomes more delirious, and the former delusions are more prominent and new ones added.

Practical observation shows that the open saloon near centers of great public excitement is not only dangerous but increases the services of lawlessness and incapacity of all who frequent it, to act rationally. Crime committed in such circumstances and surroundings is practically insanity.

Sexual crimes by this class will be of the same impulsive unreasoning character. The history of the case, and circumstances of the act, will rarely fail to show the delusional and delirious character of the mental operations. The sexual impulse in these cases is usually exhausted early in the progress of the case, and passion is a small element in criminal acts. Cases who have been excessively immoral, as a rule, have paretic symptoms and are always exhausted and have incipient or pronounced states of dementia. Criminal acts lack in reason and premeditation, also ordinary caution and prudence, and when studied point out clearly the degenerate brain of the person. Any criminal with a history of chronic inebriety, meaning continuous and excessive use of spirits, is a pathologic case and should come under medical care and study at once, before his case is adjudicated or is examined legally. What are the physical conditions which have entered into the act, and been influential or prominent as causes? It is the answer to this question which will determine what disposition should be made of the criminal.

READY-MADE MEDICINES.

BY CHAS. E. WARREN, M.D.

ROSLINDALE, MASS.

Some of the many medical journals, and societies, assuming a censorship in the matter, unauthorized by reason, and mistaking a spirit of obstructiveness for one of conservatism, have been trying in the past and are attempting at present to pronounce a wholesale damnation of ready-made medicines, without discrimination, asserting that such preparations are unscientific and unreliable; branding the physician who avails himself of them as too lazy to write a prescription, or too ignorant to know how. The physicians are also stigmatized as violators of the Code and irregulars, and are tacitly excommunicated from the body medical, by these self-appointed and self-righteous judges. It is too true, 'tis a pity too, that there are in existence many medicines, made up of unknown or unheard of ingredients, claiming to cure every ill that flesh is heir to, and many besides that have a spiritual existence only in the mind of the originator; myths, which he sends forth to dwell in the bodies and terrify the minds of his victims, as spooks and ghouls were supposed to do in ancient times, living on human flesh and preying on immortal souls. Of such remedies we can not express too deep an execration or pronounce too severe condemnation. We trust that there are few physicians who are so low in morality or so poor in purse as to resort to the use or recommendation of such remedies, and we are sure that all physicians and well-educated people will agree with us that the use of patent medicines without a knowledge of their composition, does injury to the health of the people.

"Because they may, and in fact sometimes do, contain powerful or poisonous articles unsuspected.

"Because they always may be, and often are inert, and become a false reliance to the neglect of other and due measures in the care of health.

"Because they are liable to be changed in composition so that any experience of their effects as they are purchased at one time, is not conclusive as to the same-named articles purchased at another time.

"Because they favor excessive recourse to medication, and thereby increase the resort to physicians, and intensify the demand for the physician to give medicine whether needed or not.

"Because it is submitting disease to the treatment of a distant and irresponsible stranger, and hazarding health in an apparent game of chance.

"Because they are trusted to act as an antidote in the sense in which no medicine can act.

"Because their analyses show the greater part of them to be given with multiplied falsehood, and the patronage of falsehood must be demoralizing both to the mind and to the body."

On the other hand, there is a class of special medicines, the composition of which is known, many of them prepared from the formulas of reputable and eminent physicians of high standing, by large houses or competent individuals, who have attained great skill by long experience. Such preparations have a merited place in modern medicine and are to a greater or less extent, employed in the practice of every physician.

It would be manifestly absurd to condemn in one sweeping statement, without a hearing and without qualification, all remedies known by a special name

or which are superior in purity, elegance of preparation, facility of administration or assimilation, or which are prepared by a well-known house, simply for any one of these reasons mentioned.

It is claimed that the use of these remedies is unscientific. But why, forsooth? Is it not unscientific and irrational not to use them? Medicine ought to avail itself of every remedy that it can obtain.

The Code asserts that it is unbecoming to the profession to keep secret any remedy which is found to be of benefit to mankind. But if we are required to give information to our confrères, *pro utilitate hominum* should we not also be willing for the same reason to accept information, or its equivalent, a remedy which will alleviate suffering or cure disease?

The duty of the physician morally, aside from monetary questions, is to alleviate sickness and this he is in honor bound to do, in allegiance to the name he bears, regardless of any code to the contrary. If a medicine is in the market which is superior to any that he knows of, he is bound to use it. Even the courts of justice say this, for a man is supposed to keep abreast of the times and to give his patient the benefit of all the improvements that progress may have introduced.

Many of the preparations in that classic book of reference, the Pharmacopœia are merely empirical compounds, some of them centuries old, handed down with the Code, as relics of a by-gone age, moss-covered milestones in the road of progress, which would be more fitting as tombstones of the dead past. When we read the list of advantages claimed for some of the officinal drugs, and see what an army of ills each one can slay single-handed, yea, more than the jawbone of the ass, in Samson's hands, we are led to think that the description is nearly as inclusive and sweeping as that of some quack medicines which claim to cure everything without regard to sex, age or nationality.

Many special medicines contain but one remedial agent in an agreeable vehicle or combination. Others are rational compounds which clinical observation and physiologic experimentation have shown to have a real value in medicine. No one can consistently deny but that the value of a given drug is increased with its elegance of administration or perfection of assimilation. A cod-liver oil emulsion is certainly tolerated in many cases where the plain oil would be rejected, and we think the physician who would refuse to use one of the many emulsions in the market in such a case would be guilty of contempt of the times and negligence of his duty to mankind. The same is true of all elegant preparations; gelatin- and sugar-coated pills, encapsuled powders, cachets, flexible capsules, elixirs, syrups and the like, and in especial of prepared foods, yet such is the obstructiveness of conservatism that at a recent State meeting of physicians all food articles were excluded from the exhibit. Such an action was certainly very short-sighted in its policy and derogatory to the good name of the profession as a progressive body. Physicians, who all of their lives have laid special stress upon the advantages of a properly regulated regimen in living and eating, and have attempted to discourage the indiscriminate employment of medicine by the profession, and the irrational resort to drugs by the laity as a cure for every ill, are helplessly and involuntarily placed in an anomalous position by such an action which seems to set medication above treatment. They seem to say to the young physician, You must give medicine; let nature take care of herself. Medicine you must give! Accordingly the advance guard who depend more upon a rational treatment, are cut off from the main body of the rank and file and left without support.

We eat to live, but unfortunately some are so constituted that it is very difficult to find anything suitable to eat. In wasting diseases, in fevers, where it is all important to keep the spark of life alight until we can subdue the raging disease, or until it wearies itself out and its violence is overcome by sheer exhaustion; in such cases where each drop of nutriment is fuel, like oil for life's flame, we welcome liquid foods, beef extracts and other invalid foods as we would nectar from the gods. To the invalid, such foods may serve as a staff to aid him on life's rough road, to help him to ford the river of disease, and perhaps to gain the vantage ground of health beyond. In such a case, food is far more valuable than medicine and, in fact, in some cases medicine is injurious.

It is said that ready-made medicines are unreliable. In truth, many of these are more reliable than those extemporaneously compounded. Even the druggist who attempts to dissuade the physician from the use of these articles, avails himself of a certain class in his extemporaneous work. Tinctures, syrups, extracts, plasters and the like are sold in large quantities to the druggist, and few at the present day fill their stock bottles with their own preparations, since they can purchase them, of standard and uniform strength, cheaper and better than they can make them extemporaneously. In the preparation of these remedies the purest and freshest drugs are employed, as a rule. Expensive machinery is needed and the utmost care is taken at every step to retain the activity of the drug. Careful assays are made during the progress of manufacture and a standard article is placed on the market.

It is asserted that the use of these remedies is a violation of the Code of Ethics. It is not! These preparations are not patent or secret and are not vaunted as cure-alls. They are advertised, legitimately, in medical papers of established character, the proper medium for conveying information to the profession. The manufacturers incur great expense to inform the profession still more, by samples and circular letters, and by their agents, all of whom are as a class gentlemanly in their address and unobtrusive in their manner, contrary to the rule of the road that "a drummer is a bummer." Many of these agents are young physicians and are thoroughly entitled to the respect of the physician upon whom they call. No man knows so much but that he may know more. I am not ashamed to say that I have learned many points of value in talking with such men and have seen some very pretty and striking demonstrations in my office, and yet some men who are ethically gentlemen prove themselves practically boors by their ungentlemanly reception of agents, forgetting that civility costs little and is worth much.

Any one who uses ready-made preparations, does so understandingly; the character and quantity of the ingredients is known; the dose of each is regulated and it is as proper to prescribe them as it is any drug in medicine. It is unfortunately true that these remedies may be abused. Manufacturers may advertise their preparations among the laity and they may

thus become household remedies. But if they do good and relieve suffering they are in accordance with the Code. Then, too, there are many drugs that are household articles such as Jamaica ginger, paregoric and the like, and yet we prescribe them in spite of the fact that they are known to the public. Granting that the manufacturer abuses the confidence of the physician, the latter has the remedy in his own hands. He alone can regulate his own actions and it is manifestly unjust for any man or clique of men to lay down arbitrary rules for his guidance, to trespass upon his liberty, or to dictate arbitrarily, "this, thou shalt not do."

I am convinced that much of this hue and cry is raised by mercenary druggists, actuated by envy or malice. One reason for this is that it is becoming possible for the physician to dispense his own remedies, thus naturally depriving the druggist of a large percentage of profit. His cupidity being disappointed, he turns like a snapping dog on the one who opposes him and by blackmail attempts to injure him. In former days the physician properly filled his own prescriptions; the druggist was a latter-day convenience, but now the physician has become the druggist's convenience. The patient comes to a physician and gets a prescription, which he has charged; he takes this to the druggist who fills it and gets cash, several hundred per cent. upon the dollar, in many instances. If the druggist is not over-scrupulous, he will not hesitate to fill the prescription an indefinite number of times, by number, for any one who may call, or to recommend the prescription to others, or to put it up as a preparation of his own. We once had a patient who begged for a face lotion and we gave her a prescription making a 4 ounce mixture. She liked this so well that she had the druggist put up a gallon of it and retailed it to her neighbors and has since established a thriving business. In another case, an enterprising druggist, more enterprising than honest, criticised a prescription and the treatment, and sent the patient to another physician who paid the druggist a percentage—and the patient—died. These are not imaginary cases but facts, for which I can vouch.

Physicians can change all this and easily settle the much disputed point as to the ownership of the prescription by furnishing the patient with his medicine, no prescription being needed. The patient is thus better satisfied as he gets something material, a *quid pro quo* for which we will pay much more readily than for a prescription and advice. The average mind can not approximate or appraise the value of an opinion; it can set a price on the material substance. Hence it happens that the druggist is paid, while the physician may whistle for his fees. The one is a business transaction, by a tradesman, the other an ethical courtesy extended by a professional gentleman, who sets a false dignity upon himself, and his comrades, and who is deterred from setting a just money value upon his services, because forsooth it is derogatory to the dignity of the profession. Still a man is thought more of if he insists upon his rights and for value given a physician certainly ought to insist upon an equivalent value in return.

Aside from the politic aspect, the physician can often alleviate suffering, at once, by having a medicine case handy, greatly to the relief of his patient and to his own reputation. Tablets, triturates, and concentrated tinctures and extracts furnish potent remedies, in a portable form, which are of especial value in emergencies and in night service when it would be impossible, or would involve great delay to obtain them from a druggist at a time when a minute saved may mean a life saved. The charges made are serious and demand earnest consideration, but they should be conscientiously disposed of and be handled without prejudice. We have spoken of the Code. We do not want to be considered as opposing the Code. It is very good what there is of it, and plenty of it, such as it is. It contains incongruities, inconsistencies and contradictions which are not acceptable to a reasoning man. It attempts above all to manufacture a gentleman by arbitrary rules, and yet all know that gentlemen are born so and are not made so. The profession, individually, need no such Code. If a man can not keep the Golden Rule and the eleventh commandment, on principle, he ought to do so from policy. The profession do need a rational code of instruction in complicated cases and need it very much. The present Code is antiquated, and in many respects obsolete, and to be guided by it is like navigating one of our monster iron steamships with a crude and ancient compass and a roughly drafted primitive chart, both uncorrected and uncertified and sure to run the ship to destruction.

The Code tries to cover too much and takes too lofty ground. Some consider medicine a science, others an art. Some think physics a profession, others a trade. No rules can cover all this variety of purposes. The business must be governed by business laws which are practical. Science, which is essentially built upon theory, until proved by fact, can not be bound by narrow rules but must have latitude to soar and be visionary, to dream and, perhaps waking, find a reality.

All of us, as physicians, I am sure honor the first principle of our profession, that to alleviate suffering is of the first importance. I am sure we all realize the high morality of our calling and endeavor to advance its highest good, but incidentally the corporal existence must be maintained, for without a body there is no mind. So the money question is an important one after all. Way down at the bottom of the matter, at the root of the evil, we catch a glitter of gold, and we see the whole of mankind digging for that glittering gold with all their energy. Fame is but a name and glory but a story; both may make a good dessert but not a good square meal and neither has a marketable value.

GANGRENOUS INGUINAL HERNIA.

HERNIOTOMY INCISION MADE—BROKEN GUT FOUND—LATERAL INTESTINAL ANASTOMOSIS WITH MURPHY BUTTON THROUGH INDEPENDENT LATERAL ABDOMINAL INCISION—SIX MONTHS LATER, AN END-TO-END UNION FOR THE CURE OF FECAL FISTULA—RECOVERY.

Read before the Chicago Pathological Society, Feb. 11, 1895.

BY THOMAS A. DAVIS, M.D.
CHICAGO.

Patient a male, white, aged 36. Admitted to the Medical Department of Cook County Hospital on Feb. 27, 1894. At the time, the following brief his-

tory was written: patient has been sick about one week, suffering from severe pain across the lower part of abdomen. His bowels have not moved for five days. He has suffered from a right inguinal hernia for nineteen years and stopped wearing a truss two weeks ago because of pain in the abdomen which he thought due to the truss, which had been worn with comfort for years previously. Has been vomiting for three days (not fecal) and has also had troublesome hiccoughs.

Examination: chest negative; abdomen rather distended, tympanitic on the left, flat on the right. Hernia is reduced. No impulse on coughing. Patient thinks that the hernia does not come down, when he stands up and coughs.

Morphiæ sulph.	gr. 1-6
Pepsinæ	gr. ii
Sodii bicarb	gr. iv.
Bismuth sub nit	gr. v
Pulv. Rhei	gr. ii

Hot fomentations to abdomen.

This was the treatment given from the day of entrance into the hospital February 27, until March 3, when I made an examination of the case with the interne, and concurred in his diagnosis of strangulated hernia. The patient was immediately transferred to my care in the surgical ward and prepared for operation. The diagnosis was based on the history gotten at the time of the examination: that the intestinal obstruction symptoms did not subside after the apparent reduction of the hernia was made; there was tumefaction and tenderness on palpation in the right inguinal region (the seat of the hernia); the temperature was 97 degrees F., with pulse 84 and respirations 24 per minute. The patient's features were expressive of great distress.

Operation: an incision as for herniotomy was made. The hernial sac was found to be gangrenous, the gut gangrenous and broken open and fecal extravasation, which had given rise to a phlegmonous inflammation of the surrounding tissues had occurred. This seemed to me to be a very unfavorable field for a hernia-laparotomy and equally so for the establishment of an artificial anus, as very little, if any, intestinal contents passed during my inspection of the broken-down gut; and if, as I thought, the obstruction was due to inflammatory adhesions, together with still existing primary construction at the inner ring, to break these adhesions down, it seemed to me, would invite a septic peritonitis. For these reasons I concluded to make a lateral-intestinal anastomosis with the Murphy button through an independent lateral abdominal incision. The abdominal wall was thoroughly cleansed and the herniotomy wound was packed with iodoform gauze. A lateral (right) abdominal incision about five inches in length was made, extending to within two inches of the upper end of the primary herniotomy incision. When the parietal peritoneum was cut through, a distended, congested, intestinal coil appeared and was traced but a short distance downward when its attachment to the internal ring was found. This was the proximal gut. A loop of collapsed intestine was drawn up from beneath the distended gut, traced to the same point of adhesion, and was considered to be the distal gut. There was no evidence of peritonitis. A lateral anastomosis was quickly made with button No. 3, and the abdominal wound closed. Free fecal circulation was promptly established and patient made an uneventful recovery, so far as general health was concerned. Locally, however, the conditions were not so favorable. The button passed down the proximal portion of the gut and necessitated extraction nearly two months later.

About one month from the time of the removal of the button, fecal discharges ceased from the fistula. Patient was now allowed to get out of bed and to be about the ward. He grew strong, increased in flesh and felt pretty well, but the fistulous discharge increased and became fecal, and patient was transferred to the suppuration ward and given a bed, the first one from the large outside door where he said he took a violent cold the first night that he spent in the ward. From this time he began to fail. A severe cough with free purulent expectoration, loss of appetite and progressive emaciation attending. The offensiveness of the rapidly soaked dressings made life miserable and the patient urged an operation for the cure of the fecal fistula. This I did on September 10.

After curetting the fistulous tract, carefully disinfecting the field of operation and packing end of proximal gut with iodoform gauze, a hernia-laparotomy incision was made, opening into the peritoneal cavity just above the internal ring. The adhesions to this gut were but a line in thickness, though quite firm and strong. They were severed with the scissors, the intestine drawn down and Murphy's intestinal clamps applied. The mesentery was then tied off for two inches from either end and end-to-end approximation, with round button No. 3 was made. The peritoneal cavity was closed by suture and the external wound was sutured, leaving small space for iodoform gauze drain.

The recovery from operation was apparently without incident, excepting that the severe cough caused some intra-abdominal pain and necessitated an extra compress over the field of operation. Button was passed per rectum the tenth day. The subsequent history is that of progressive emaciation, severe cough, profuse expectoration until death October 23, forty-three days from the last operation.

The patient was able to be out of bed for a few days from about twenty days after operation. The history of the case from the time of transfer from medical ward March 3 to the time of death could not be found, so that I have been obliged to draw almost wholly upon my memory for this description.

NECROPSY.

Body quite emaciated. Circulatory organs: pericardium smooth and shiny and contains about 30 cc. straw-colored fluid. Heart: about the size of owner's fist, soft and flabby, weighs 320 grams; decolorized clot in right ventricle; both ventricles contain clotted blood; tricuspid valves negative; numerous small placques in aorta; all valves competent to water test. Pleura: adhesions on right side anteriorly; none laterally or posteriorly; few adhesions over left side; there were firm adhesions below to diaphragm. Lungs: weight together 1700 grams (left 920 grams); right lung, firm inter-lobular adhesions, crepitates and floats; lower lobe, posteriorly is firm; both upper lobes emphysematous along anterior margins; a thin frothy fluid expressed from lower lobe (edematous); small cavity in apex of this; (right lower lobe not described). Left lung: lower part sinks, upper lobe emphysematous; inter-lobular adhesions; pleura much thickened in places;

the whole lower (left) lobe has many cavities, filled with brownish purulent fluid, some of it being thick and cheesy, gray and very offensive. No description given of condition of lung around these cavities.

Peritoneum: smooth and shiny except over region of operation. Stomach: negative. Small intestines: a band of adhesions from the parietal wall near the seat of wound of operation, passed downward and attached to ilium about three feet above ileo-cecal valve. Large intestine: negative. Liver: two thousand grammes; surface smooth; markings distinct; substance firm; lobules indistinct; center depressed and periphery raised; on cut section, pale in color. Gall bladder: thirty cc., dark bile; duct patent. Spleen: weighs 140 grams; flabby; capsule smooth; section, soft and pale in color. Kidneys: embedded in mass of fat, together weigh 400 grams, right, pale on section; pyramids distinct; cortex to the medulla as 2½ to 1; capsule peels readily; stellate veins marked; vessels in cortex well marked; glomeruli quite distinct. Left kidney: small cyst on posterior inferior extremity; otherwise same as right kidney. All other organs examined, negative. Microscopic, anatomic or bacteriologic examination not made.

Post-mortem diagnosis:

1. Beginning endarteritis deformans of aorta.
2. Localized adhesive pleuritis.
3. Right lung: edema of lower lobe and small cavity.
4. Left lung: multiple cavities in lower lobe. (abscesses).
5. Parenchymatous degeneration of liver.
6. Parenchymatous degeneration of spleen.

The specimen of intestine which I will exhibit shows perfect union in both lateral and end-to-end approximations of bowel. The cicatrices are linear and slightly less thick than the normal bowel wall. The thickening near the end-to-end approximation is due to the puckered four inches of mesentery which was tied off from the intestine resected. The lumen of the end-to-end union is as large as the button; that of the lateral about one-fifth larger.

CONCLUSION.

1. That the cause of death was independent of surgical operations.

2. That while the statistics so recent, and as yet showing so few cases of intestinal union with the Murphy button, do not place it beyond the pale of a device on trial, yet, if the statistics are referred to at all, we have the same right to make comparison between the different methods of the application of the button. In the *Clinical Review*, February, 1895, Dr. Murphy reports, in total number of cases up to date, seven cases of lateral anastomosis for benign obstruction with seven recoveries. With my case it would be eight cases with eight recoveries. In the same report he gives, "of the resections for gangrenous hernia, twelve cases with two deaths, a mortality of 16⅔ per cent."

In both of the fatal cases the gangrenous gut was broken, and in one an extensive peritoneal infection had occurred prior to the operation.

In his conclusions, in Dictum No. 6, Dr. Murphy states that end-to-end union should always be performed in gangrenous hernia. For the reasons given, and in consideration of experience in my case, I would beg to differ, and would offer a classification of gangrenous hernia: 1, with unbroken gut which should be treated by end-to-end union; and 2, broken gut which should be treated by lateral anastomosis.

3. That the restoration of the fecal circulation by means of the Murphy button gives a large union-lumen, with marginal linear cicatrix, and all of the apparent conditions would seem to insure permanency and adequate patency.

DISCUSSION.

DR. J. B. MURPHY—The question raised by Dr. Davis as to whether the lateral or end-to-end operation should be preferred is certainly one that has two sides to the question, and I can see that there is good ground for taking the position the Doctor has taken. In my most recent case, which was somewhat similar to the one reported, there was gangrene of this portion of the bowel as well as the sac; that is, the sac of the congenital hydrocele was entirely gangrenous and infected, and it has been my belief since, that if I had

merely drained the hydrocele sac and made a lateral approximation in the hernia above, I might have saved the patient. Still there was a large quantity of fluid and blood in the peritoneal cavity at the time of the operation, and the case had gone on for six days with complete obstruction. Lateral approximation could have been made very readily without opening the sac of the hydrocele. The diagnosis of the pathologic condition was not made until I opened the original hernial sac. There were two sacs in this case; one hernial, and the other a hydrocele sac, and the patient had a Littre hernia in the ring of the hydrocele sac, involving four-fifths of the circumference of the bowel. The Doctor reduced hernia from the hernial sac and supposed he had completely done so, but examination of the patient before operation showed that he evidently had continued obstruction. I believed that it was because the hernia had been reduced *en masse*, and that the strangulation continued at the neck of the sac within, as we frequently find in umbilical hernia, but that was not the case. It was simply a strangulated Littre hernia that had existed from the beginning in the hydrocele sac, as shown in the illustration.

The operation of lateral approximation frequently requires a secondary operation, but not always. Dr. Joseph Price, of Philadelphia, has operated in one case which did not require a second operation, and there are two or three others who have done the same. Another objection to lateral approximation with this method is that the button might appear on the proximal side, that is, instead of falling into the distal portion of the intestine, it will fall into the proximal portion, the distal portion having been contracted before obstruction; but if the precaution be taken on the third or fourth day after the operation, to compress the fistula so as not to permit the escape of the contents of the intestinal canal through, the current will pass out through the opening in the side of the button, and the button will not appear in the fistula but pass on into the intestine. I saw an article recently in the *Annals of Surgery*, reporting a case of this kind, in which the doctor stated that on removing the button through the fistula, he tore the adhesions that had formed at the *site of approximation*. The report differs very materially from one which I received from the interne who made the autopsy after the death of the patient. The interne told me that the intestine was torn loose from the abdominal wall in extracting the button, and not at the seat of approximation. The doctor who reported the case must have misunderstood the post-mortem report which he had received or had forgotten it. It makes a very great difference in these cases, for it is an unsurgical procedure to extract a button of the size of No. 3 through a fistulous opening in the intestine. Dr. Davis tells us that at the second operation there was but slight adhesion; that the adhesion of the bowel to the abdominal wall was not firm. When we are resorting to lateral approximation, one of the precautions to be taken is not to make much traction on the intestine. If this is done we will tear it loose from the abdominal wall and leakage will occur.

Another difficulty encountered in lateral approximation is that we can not always tell when we have the right coil. (Dr. Murphy demonstrated the importance of this point by illustrations.) With reference to the mortality following end-to-end approximation for strangulated hernia, where we have a gangrenous condition and all the tissues are infected, we must expect it to be large. If we have a hernia that has existed for a long time with all the tissues infiltrated, I think the position taken by the Doctor, of resorting to lateral approximation is the proper one; but if we have the gangrenous non-perforative condition, mentioned by the Doctor, I believe the end-to-end operation is preferable.

NEPHRECTOMY FOR TUBERCULAR AND SURGICAL KIDNEYS.

Read before the Chicago Pathological Society, Feb. 11, 1895.

BY J. B. MURPHY, M.D.
CHICAGO.

The following is a clinical history of the cases from which I secured the kidneys I here present for your examination:

Case 1.—Mrs. P., age 32, of Dixon, Ill., came under my observation May, 1888. Had complained for the last three months of pressure and pain on the right side just below the margin of the ribs. The pain was of a somewhat intermittent character, at times severe and at times entirely absent, but a sense of increasing pressure on the right side caused the patient to consult a physician. Examination of heart and lungs negative, patient emaciated, abdominal walls drawn in. On the right side a movable tumor the size of a man's fist could be detected at the position of the right kidney. It was somewhat irregular and very sensitive to pressure. It moved up and down about one inch with respiration. The fingers could not be pressed in above its margin, between it and the liver. The urine showed pus in considerable quantity, a few blood corpuscles, and no renal epithelium; specific gravity 1018; quantity in twenty-four hours, forty-one ounces. The lower end of the left kidney could be felt between the hands, was not enlarged and was slightly movable. The pressure on the side continued during the succeeding week. Urination became more frequent and slightly painful. Temperature in the evening 101, on an average. There was at all times an absence of a history of renal colic. Diagnosis: pyelonephritis. Operation, September 1888, lumbar incision; pelvis exposed, kidney opened and drained; contained pus, but no stone. I could not succeed in passing a catheter down the ureter. Pus disappeared from the urine for a time, and the patient improved. The tumor diminished in size. After a time the drainage was dispensed with, but the patient was attacked with chills and fever, and the drain had to be re-inserted. Notwithstanding the thorough drainage, every three or four weeks the patient would have an attack of fever. During the attack she emaciated rapidly, and the pus in the urine increased in quantity. The discharge through the tube was offensive. She wore an elastic urinal over the tube. About half a pint accumulated in twenty-four hours, consisting of pus and urine. This was kept up until October, 1894, six years, when the patient finally consented to have the kidney removed. Quantity of urine passed daily, through the bladder before operation, thirty-two ounces, containing considerable pus; urination every hour, day and night. The patient had a chill the second day before operation; temperature 105, pulse 134. She had become addicted to morphin. Operation Oct. 19, 1894. A posterior incision around the sinus was made, and liberation of the urinary fistula down to the perirenal adipose tissue effected; then an anterior incision along the right linea semilunaris into the peritoneal cavity. Cecum and colon were then displaced to the right. An incision five inches long in the posterior peritoneum exposed a large indurated mass extending from the lower margin of the liver to the brim of the pelvis, and from the median line to the spinous process of the ilium. The posterior peritoneum was peeled off, drawn forward and sutured to the anterior peritoneal layer, thus shutting off the peritoneal cavity from the field of operation. The process of enucleation was then begun, first on the outer side until the fistula was reached and the adhesion separated, then the upper margin separating it from the liver and gall bladder. Great difficulty was experienced in removing it from the iliac vessels. The tumor was then drawn forward in the wound, the ureter separated and cut off. The induration continued beyond, and embraced the abdominal aorta and vena cava. Twice I had my finger around them, believing they were adhesions. A very careful dissection was then made between the margin of the kidney and the vessels on the right side; the renal vessels secured and ligated; remaining adhesions separated and the kidney taken out. The ureter was fastened in the lower angle of the wound; the upper angle was packed with gauze, and a small anterior drain of gauze close to the ureter. Gauze drains were used, and the ends retained in the wound.

It was the most difficult operation I had ever performed; and I am confident if I had endeavored to remove the kidney through the posterior incision, I should have torn either the iliac or abdominal vessels or both.

The patient's convalescence was uneventful. The morphin was cut off at once, and on the third day the patient jumped out of bed and quarreled with the nurse for morphin. Still it had no untoward effect on her. The pus has entirely disappeared from

the urine. The average daily quantity is forty-seven ounces. At the time of operation patient weighed 91 pounds; she weighs now 128 pounds.

Pathologic condition of kidney: the cortex had almost entirely disappeared; here and there a small nodule of secretory tissue remained. The mass looked like a thick-walled multilocular cyst; some of the pockets had only small openings accounting for the retention symptoms. The ureter was pervious, but its mucosa very much thickened. The microscopic appearances will be described by Dr. LeCount. The gross appearances were those of a pyelitis with retention.

Case 2.—Mrs. C. applied to me for treatment June, 1894. She had previously suffered from a pleuritis with effusion, which had disappeared; had enlarged glands of the neck, and a family history of tuberculosis. Complained of frequent urination followed by severe pain; quantity of urine passed in twenty-four hours, thirty-four ounces. It contained blood, pus, and tubercle bacilli. An enlarged, slightly movable nodular kidney could be felt on the right side. Examination of bladder, Kelly method, showed a tubercular ulcer around the right ureter and induration of ureter also present. Urine from that ureter contained a large quantity of pus; urine from left ureter normal. Diagnosis: tuberculosis of the right kidney and ureter, with tubercular ulcer of the bladder. Patient was suffering so intensely that it was decided to remove the right kidney and ureter. This was done with an incision similar to former case, in the right linea semilunaris. The kidney was much enlarged, sacculated, still readily enucleated; vessel ligated, ligatures cut short. The ureter was much thickened and removed to below the margin of the pelvis, was ligated, and a strand of gauze brought from the ureter out of the lower angle of the wound; wound closed with posterior and anterior gauze drain; forty-eight hours drainage; removed, with result of complete primary union. Patient's bladder symptoms subsided, a very small quantity of pus being found in the urine; she left the hospital three weeks after the operation. Two weeks after leaving the hospital the tenesmus set in anew. The pus increased in the urine; the bladder symptoms increased rapidly in severity until complete control of the sphincter was lost. The position in the wound where the ureter was sewed, reopened. Bacilli were present in the urine. The patient's condition became worse. She died Jan. 10, 1895, with symptoms of uremia, dropsy, and tuberculosis of bladder.

Pathologic condition of kidney: kidney reduced to a tubercular sac; all resemblance to a kidney gone; made very fine sections. The cortex was reduced to a granulation tissue sac, caseous inside. Here and there, evidences of tubules with regenerated lining cells, only obliterated glomeruli, the so-called fibroid glomeruli on the outer portion seen. The ureter was not so much attacked by the tubercular process. The muscular walls were in fair condition. The lining was gone and the ureter filled with caseous and necrotic *débris*.

The anterior incision made in these cases, I consider of very great importance, as it exposes the field of operation perfectly, and all tissues can be recognized and relations kept well in view. The only advantages which a posterior or lumbar incision has over an anterior are: 1, the peritoneum is not opened; 2, drainage. The method I used, of suturing the posterior parietal peritoneum to the anterior, before extirpating the kidney, practically closes the peritoneum and makes the operation extra-peritoneal. I believe there is very little more, if any, danger with this method than by the lumbar incision. The posterior drainage is very easy to make after the operation is complete. The removal of an enlarged and adherent kidney from a fat subject through the lumbar incision is a very difficult and trying operation.

DISCUSSION.

Dr. E. R. Le Count exhibited the specimens in connection with Dr. Murphy's paper, and made the following remarks: "The specimen from the first case shows the ordinary condition found in pyelonephritis, and at first I was inclined to think it was tubercular, but on examining the capsule and the trabeculæ which divided off the cavities, I find it is not. The condition of the tissue is much more firm than that usually found in tubercular pyelonephritis, although on the whole, there is not a great deal of difference between the kidney in the first case and that from the second one, which is a tubercular pyelonephritis. There is this difference in the second case, that the formation of connective tissue in the capsule is not as extensive, and the connective tissue trabeculæ which run down toward the pelvis are not as extensive either. Within the cavity of the pelvis we notice various sacculations, and the dilated calices are lined by well-marked necrotic membrane which is visible even at present."

A CASE OF BILIARY OBSTRUCTION BY A CALCULUS, WITH INTERMITTENT PYREXIA.

Read before the Chicago Pathological Society, Feb. 11, 1895.

BY ELIZA H. ROOT, M.D.

CHICAGO.

Mrs. M., aged 50, married thirteen years, the mother of five children, all healthy, the youngest being 7 years of age. She entered the Chicago Hospital for Women and Children Nov. 4, 1894. Previous history; the following history was kindly furnished by Dr. C. D. Collins: the patient was healthy before marriage, a few months after which she had her first attack of chills and fever. Some months later her first child was born, and during the following year she was quite well. Then the second attack occurred. From then on, she had repeated attacks at irregular intervals and lasting varying lengths of time. These attacks were characterized by chill, fever and sweat, followed by great prostration. Soon after the birth of her youngest child, an attack occurred after which she never wholly recovered, but has failed in health and suffered from recurrences of the group of symptoms. She was habitually constipated, the feces clay-colored. During the last three years there has been no albumin found in the urine. She was better when upon vegetable diet. There is no history of syphilis. There was not much pain until recently, when it was severe at times. Condition on entering hospital: patient was much emaciated, skin and sclerotics deeply yellow. Coughs a good deal and suffers from dyspnea. Temperature, 99.8 degrees; pulse, 100; respiration, 36. The liver was greatly enlarged, the right lobe extending to the crest of the ileum, the left lobe filling the epigastrium and extending into the left hypochondriac region.

The patient was in the hospital one week. The urine was acid; specific gravity, 1010, bile stained in color, and contained no albumin. The pulse was irregular, ranging from 80 to 120. The temperature was from 99.8 to 101 degrees F. The respiration varied from 30

to 36, and there was great dypsnea at times. Patient died comatose.

AUTOPSY BY DR. VIDA A. LATHAM.

The examination was made twenty-four hours after death, Nov. 12, 1894. The salient points were as follows: there were firm adhesions over surface of left lung, with calcareous patch on posterior surface. The heart weighed 496 grms., and showed simple hypertrophy. The pancreas and liver with pylorus end of the stomach were firmly united by adhesions, and together weighed 3,712 grams. The pancreas was very firm and showed increased connective tissue. The liver was greatly enlarged, a thick yellowish-green fluid oozing from its cut surface. Pigmentary deposit was seen in the periphery of the lobules, and there was a marked hyperplasia of Glisson's capsule, even to its finest ramifications. The gall bladder contained little fluid, and its walls were very friable. A calculus was found in the bile passage at the junction of the cystic and hepatic ducts, the latter being larger than the gall bladder. The calculus was two inches in length. It was examined chemically by Dr. J. H. Salisbury, and found to consist of cholesterin, the soft exterior being reddish yellow in color, but containing little or no trace of iron. Crystals of bilirubin and biliverdin were present in the liver cells, capillaries and bile capillaries. The ductus communis choledochus was patent. A point of interest was a duct-like connection between the duodenum and fundus of the gall-bladder. This is evidently a point where suppuration had occurred and healing had taken place.

The kidneys together weighed 400 grms. They were both pale with indistinct cortical markings. The spleen was enlarged, weighing 432 grms., nodular and firm to the touch, and deep red in color. The stomach was small, with thickened patches along the greater curvature. There was a decided constriction of the pyloric end at the junction with the upper two-thirds of the viscus. The peritoneal cavity was filled with a clear yellowish-green fluid. There were abundant firm peritoneal adhesions.

Bacteriologic and microscopic examination: cultures from the liver gave the bacillus coli communis and pyogenic cocci. The tissues, hardened and stained in various ways, gave the following, on section under the microscope: the spleen showed the changes of chronic passive congestion; the pancreas exhibited a well-marked chronic interstitial inflammation with indistinct parenchymatous cells; the kidneys showed an arterio-sclerosis, with shrunken glomeruli; the tubular epithelium was swollen and desquamated; the capsules were thickened and there were subcortical hemorrhages. Blood-cells and casts were seen in many tubules. These changes were most marked in the left kidney. In the liver were seen a commencing cirrhosis and a perihepatitis. Bands of fibrous tissue extended in from the surface. The liver cells were cloudy, swollen and fatty. Some times between distended capillaries were seen biliverdin crystals, granular material, breaking-down blood cells, some polynuclear leucocytes and bacteria, bacilli and streptococci. In places the central vein of lobules was obliterated. There was a well-marked cell infiltration and hyperplasia of the fibrous tissue. The bile ducts were atrophied, as also the portal vein and hepatic artery. The iron reaction was tried with negative results.

DISCUSSION.

DR. J. B. MURPHY—The symptom of pyrexia in connection with lesions of the gall tracts is an exceedingly interesting one, and one concerning which we are not yet enlightened as to the exact cause of the pyrexia. We have the pyrexia occurring most frequently where a gall stone has reached the common duct, usually in the ampulla of Vater, and we have all the symptoms of an intermittent fever, with rigors every two, four or seven days, and sometimes even every fourteen days with regularity. In the cases in which post-mortem examinations have been made, it has been found that there was always an abrasion as a result of pressure of the stone, and it is my belief that on this account as well as because the ducts in this region are richly supplied with lymphatics, we have a septic manifestation developed. The temperatures occurring from impactions higher up are more rare, but not so very much so. We have cases of obstruction (from retention) to the cystic duct. In many of the cases I have operated upon for gall stones, over 50 per cent. were from obstructions in the neck of the gall bladder or cystic duct, never involving the common duct. At least 20 per cent. of these cases were accompanied by elevation of temperature. It is my belief that we either have infection or suppuration occurring in the gall bladder where we have no history that the patient has had either the presence of a stone or disease of the common duct. We know that abscesses form in the liver from impactions in the common duct; the infection in these cases must be in the duct. Where the retention is in the gall bladder alone, without infection or the presence of pus, the temperature rarely goes above 101 degrees, and where we find the presence of pus in connection with stones and cholecystitis, the temperature, even when the common duct is not involved, is as high as 103.5. I believe these are septic conditions. It is somewhat like the temperature we have from the passage of a sound into the male urethra. For a time that was considered of neurotic or nervous origin. From this condition of the common duct abscess of the liver may follow, that is, you will have multiple infarcts in the liver as a result of impaction in the common duct, which adds further to the belief that the pyrexia is of septic origin.

DR. ROOT.—The attacks of this patient continued for thirteen years at intervals, and she had these remittent and intermittent fevers. She had been under the care of other physicians who had treated her for ague; in the post-mortem there was nothing of the nature of ague shown. The peritoneum about the stomach, the liver and the upper part of the intestines were bound down with old and firm adhesions. From what I know of the case, I am inclined to agree with Dr. Murphy's idea that it was of a septic nature.

DR. GEORGE H. WEAVER.—In a case of this kind which I reported two years ago in which intermittent pyrexia had occurred in connection with gall stones in the common duct, for twenty-five years in a woman, there was noticed in her case one symptom which I have not heard spoken of or referred to elsewhere. Her bowels were constipated continuously, and if they moved freely, within a few hours she would have an attack of colic. The only way I can explain this condition is that the gall stones acted as an obstruction to the duct, the bile accumulating behind them in such a quantity that it distended the duct so that the gall stones fell back from the opening, allowing the bile to flow past into the intestines, and the bile entering the intestines in this way acted as a cathartic and caused the bowels to move. As the bile flowed from this cavity into the intestine, it allowed the walls of the dilated duct to come in contact with rough calculi, and in that way set up a spasmodic action which brought on the attack of pain. The pain was again relived by the accumulation of fluid carrying the walls of the dilated duct away from the calculi. This was to me an extremely interesting symptom in connection with the case, and it might be that the fever which followed the attack of pain was due to the absorption of poisonous materials which were present. If the surface of the tube was freshly abraded by contracting down upon the rough calculi, this absorption would be favored.

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PRE-COLUMBIAN LEPROSY.

BY ALBERT S. ASHMEAD, M.D.
LATE FOREIGN MEDICAL DIRECTOR, TOKIO HOSPITAL, JAPAN.
NEW YORK.

(*Continued from page 754.*)

Dr. Franz Boas, who has given to the study of American races more time and interest perhaps than any other man living, who has just returned from an investigation of the Indian races of British Columbia, tells me that the Tenachca and Nass River Indians, whose diet consists mainly of small fish, smelts and shell fish (this is the diet which has always been supposed by the common people, and by many doctors, to be the predisposing diet of lepers) are not leprous, but exceedingly syphilitic. Locomotor ataxia is almost epidemic among them. Dr. Gowers, of London, and many of our own specialists assert that locomotor ataxia succeeds syphilis, and that without syphilis there is very little locomotor ataxia. This is not my opinion. My experience in Japan, during two years of hard work, made it evident to me that in that region where they have lived in close familiarity with syphilis for thirteen hundred years, there never was, and there is not any locomotor ataxia. The same gentleman says that I am probably right in stating that locomotor ataxia has no syphilitic origin; for the old people of that tribe have a great deal more of locomotor ataxia than the younger and yet are less syphilitic. Besides, other tribes in that region examined by him have not locomotor ataxia at all, and yet have more syphilitic disease than the Tenachca Indians. Nor is it my belief, and I have had a great experience of such cases, that locomotor ataxia can be considered as a sequela or attenuated form of leprosy. For the disease called locomotor ataxia does not exist in Japan. If it was an attenuated form of leprosy, it would be found there. Therefore no matter how rampant the disease may be in British Columbia to-day, there is no evidence from this fact, that leprosy existed in British Columbia in pre-Columbian days.

Whether this syphilis of British Columbia came from East Asia or not, he is unable to say. He does not know of leprosy in any American primitive race.

Dr. Wm. F. Whitney, Curator of the Warren Anatomical Museum, Harvard Medical School, in an article entitled, "Notes on the Anomalies, Injuries and Diseases of the Bones of the Native Races of North America," published in the 18th and 19th Annual Reports of the Peabody Museum of American Archæology and Ethnology, Cambridge, 1886, mentions among the diseases various exostoses with and without eburnation, and among the hyperostoses the subjects were as a rule persons past middle life. He says, moreover, that the flattened heads of the ancient Peruvians show also a large proportion of hyperostosis.

Periostitis is manifested by a deposit of new bone of greater or less extent, along the shaft of some of the long bones, especially the tibia. (For the evidence necessary to prove that this, as well as other changes, are the results of syphilis, see *Boston Medical and Surgical Journal*, vol. CVIII, p. 365). The disease known as chronic rheumatic arthritis has also left its marks in roughness and deposits on the edges of the articular surfaces and on the bodies of the vertebræ. Under the heading, "Caries," he mentions three remarkable specimens.

The first, 17,223, stone-grave mound, near Nashville, Tenn., affected the spine and there resulted an extreme case of anterior angular curvature. The disease had destroyed almost the whole of the bodies of the lower cervical, or upper dorsal vertebræ, and they had become united in a firm mass. The spinal column at this point was bent forward so as almost to touch, there being but a few centimeters distance between what are taken to be the bodies of the fourth cervical and fifth dorsal vertebræ. The amount of deformity must have been very great.

In this connection it is curious to note that there are in the museum, found in the stone graves of children in Tennessee, little clay images which are faithful representations of persons affected with Potts disease, and that many of the water bottles from the stone graves of Tennessee, and from the mounds of Missouri, represent women with hunchbacks.

From the mental acuteness says Dr. Whitney, which is so often associated with this malady, it is easy to conceive that such deformed people may have been held in peculiar veneration, or there may have been some superstition in regard to their protective influence. At all events this spine furnishes the veritable proof of the existence of persons so afflicted.

The second case of caries is found in bones, 27,372, from a stone grave in Brentwood, Tennessee. The articulating surfaces of the right femur and tibia forming the knee joint, show marked erosions of the smooth hard layer of bone on which the cartilage rests. At first sight, this might be attributed to the results of weathering; but closer inspection reveals the fact that there is a marked increase in the size of the openings for the nutrient vessels for some distance from the joint on either side, and that here and there the shafts are roughened by small pieces of newly formed bone. From this the inference is justified that the destruction noted above is the result of a chronic inflammation which in no way differs from the so-called "white swelling" of the knee that is always to be found in the surgical wards of any large hospital.

In the third case, 11,891, stone grave mound, Nashville, Tenn., it is the ankle joint that is implicated. The opposing surfaces of the left tibia and astragalus are entirely honeycombed by deep depressions, separated by irregularly shaped bony trabeculæ with rounded or roughened edges. In the lower part of the tibia is seen a cavity communicating with the external surface by a small canal opening through the inner malleolus. Lying free in the cavity is a piece of dead bone, too large to pass through the hole.

These cases are interesting from the fact that such processes are now supposed to be the result of a local tuberculosis, and if this existed it is fair to assume that the internal organs must have suffered also from tuberculosis, the most common seat of which is in the lungs in some form of pulmonary consumption. This assumption is verified by one of the early writers on the habits and life of the Indians, who says of them: "*C'est peut etre du meme principe et de ce qu'ils ont toujours l'estoma et la poitrine decouverte, qu'ils contractent une espece de phthisie, qui les minant peu à peu en conduit la plus grande partie au Tombeau et à laquelle ils n'ont pu encore trouver du remede.*" (Lafitau, vol. II, p. 360, Paris, 1724.)—*Translation.* (It is perhaps for the same cause and from the fact that they have always the stomach and chest uncovered that they contract a kind of phthisis which, wearing them out, little by little, brings most of them

to the grave, and for which they have not as yet been able to find a remedy.)

There remain to note a few skulls which have cicatrices pointing to more or less extensive inflammation, the cause of which is still obscure.

The skull of a female of middle life, 18,264, from a stone-grave mound on the Little Harpeth River, Tennessee, has a number of slight cicatrized depressions, more or less distinctly connecting, passing completely round the head on the line of the forehead. Their form is chiefly linear, but in one or two places they cover spots as large as a finger nail. The parietal protuberances and frontal bone show the most extensive marks, and from the latter it passes down over the bridge of the nose. The right lachrymal canal is filled by a new and symmetrical growth of bone almost occluding it.

Tuberculation of face, from Dr. Morrow's collection of photographs.

Another skull presenting somewhat similar cicatrices, is 733, from a mound in Kentucky, in the Army Medical Museum at Washington. The whole surface of the parietal, frontal and occipital bones is covered by shallow cicatrices having a firm base, and near which are minute perforations through the intact outer table into the diploë. Some of these depressions look as if they had been made by placing a finger on the softened bone, while others are slightly star-shaped or else are linear and anastomose, surrounding islands of unaffected bone.

The general and extensive changes of these two skulls can be explained best by the assumption of a syphilitic affection. But the appearances are not quite characteristic. There is wanting the peculiar ivory-like luster to the healed spots, and the accompanying sclerosis of the bone in general.

In No. 20,180, an imperfect calvarium from Stanley Mound, St. Francis River, are a number of very slightly depressed and radiating cicatrices situated chiefly on the frontal bone. The grooves for the arteries are very deep on the inside, but the bone is not in general sclerosed.

The maxillary bones are of interest and it is a pity that the bones of the face are in such a fragmentary condition that the exact extent of the lesions can not be satisfactorily made out. In the right antrum of Highmore, the posterior wall is thickened and the superior is covered with spicular exostoses, while a large linear one reaches from near the opening across the bottom. The whole inner surface of the bone is rough, and to it the lower part of the palate bone is intimately blended. Only a narrow strip of the hard

From Dr. Morrow's collection of photographs.

palate is left and it is difficult to decide how much of the loss must be attributed to post-mortem action. But just in a line with the lachrymal canal is a rounded and roughened edge, which must have formed part of a perforation into the mouth that existed during life. A fragment of the right side of the "sella Turcica," with an attached bit of the great wing of the sphenoid and pterygoid plates shows marks of roughening similar to that on the maxilla and palate bones, as if an inflammation had extended upward from this point. The edge of the anterior nares seems more rounded and deeper than normal.

There is less remaining of the left maxilla than of the right, but the same roughness of the internal surface is seen, and this has extended forward, partially filling up the edge of the anterior nares on this side. The socket of the first molar, which lies directly beneath, has evidently been the seat of an abscess, and it is possible that this stands in a causal relation to the changes seen on the bones bounding the nasal fossæ. It would be difficult, however, to bring this into relation with the cicatrices on the forehead.

At the Army Medical Museum in Washington are the bones of the face, with the frontal bone attached, (748) from a mound in Kentucky, showing the probable effects of a large tumor. This had completely filled up the nasal fossæ and had rounded off the edges of the nasal and maxillary bones forming the boundaries of the anterior nares. The septum of the nose and turbinated bones have entirely disappeared and the ethmoidal cells were freely opened. Through the hard palate there is an oval opening extending from just behind the alveolar process through the entire length of the hard palate, leaving a narrow strip of bone on each side. The edges of this opening are rounded off similarly to those of the nose. Possibly there may have been a congenital cleft palate into the opening of which the new growth extended.

From these facts we conclude that there exist evidences of tuberculosis and syphilis in the remains of the ancient races, but no evidences of leprosy. And we further may conclude that some ancient races of America buried images, representing the diseases with which they were afflicted. We have good reasons, at any rate, to believe that the ancient Peruvians intended to represent on their *huacos* pottery, if a disease at all was represented, one which we have good reasons to believe was considered by them as aristocratic and sacred.

Dr. Emil Schmidt, in answer to my inquiries as to evidences of leprosy in Peruvian antiquities known to him, says: "As to your questions about pre-Columbian leprosy in America, I looked once more over my collection of Peruvian skulls and mummies (more than eighty specimens), but with quite negative results. I do not remember to have found any evidence of pre-Columbian leprosy in other collections examined before. We have here, in the Leipziger Museum für Volkerkunde, a valuable collection of old Peruvian pottery; unfortunately, it is packed up in the museum, being transferred in another building. A few years ago I examined this collection rather closely, and I am sure I should not have overlooked them, if there were any unmistakable indications of leprosy."

I have addressed the following inquiry to Dr. Augustus Le Plongeon: "I can not see any positive facts showing that leprosy existed on this continent before the arrival of the Spaniards, except the possibility produced by the great intercourse with Hindostan, Indo-China and Burmah, to which you seem to attach much importance, and those *huacos* potteries, on which Dr. Muniz thinks he found leprous representations. Have you ever seen any indications on any of the works of art of Yucatan of any representations which you might consider as relating to leprosy? Have you ever seen any representation of mutilated hands or feet? Did you ever see any corpses with such mutilated hands or feet? Upon what do you base your belief in the existence of leprosy in Yucatan, before Columbus, beside the intercourse of that land with leprous countries?"

The following is his reply: "As I have told you in my former letter, I have not investigated in my studies if a particular kind of disease existed on this western continent before the arrival of the Spaniards, but I regard it as probable, in view of the communications that certainly existed between its inhabitants and those of all other countries, that diseases existing in said countries were propagated among them, as they are to-day. Leprosy no doubt existed, since they had a word to designate it, and their relations with Southern India were quite frequent. In my book soon to appear, "Queen Moo and the Egyptian Sphinx," you will see the nature of their relations. The ceramics of the Mayas, at least the pieces I have seen, were ornamental, of a very different character from the Peruvian; on them were never, as far as I know, represented any of nature's deformities. The Maya ethics were of a more refined nature than those of the Peruvians. No representation on them recalls any infirmity to which the human body is subject. Their paintings and sculptures portray battle scenes, domestic life, religious and other rites and ceremonies, historical events, etc.

"I repeat, I do not know that leprosy existed among the Mayas in pre-Columbian times. I suppose it did, because they had a name for it, *Naycam*, which would not happen unless they had some knowledge of the disease."

Here we see that Dr. Le Plongeon has two foundations for his assertion that leprosy existed here before the Conquest: first, the probability of its having been introduced by the various relations of the country with Southern India; then the traditional name for it, which was *Naycam*, from the word *Nay*, to eat away, or rot. As to the first, we may say, it does not hold water. New York has a thousand times more communication with all parts of the world than Yucatan had with India, and yet it is not a leprous city. As to the second argument, Dr. Gustave Brühl has shown in his studies on pre-Columbian syphilis in America, that the Mexicans and the Mayas, and also the Quechuas and Aymaras, of Peru, had names for syphilis before the Spaniards came. He argues that diseases introduced by the Conquerors were designated by the Naturals, as a rule, by some reference to the characteristic symptom, and that therefore syphilis especially was of pre-Columbian origin, as its name was *not* so designated by the Mexicans, Mayas, Quechuas and Aymaras. Now the name *Naycam*, which means an eating away, rotting, would have to be considered as the name of a disease introduced by the Spaniards, and beside it might be applied as naturally to lupus and syphilis as to leprosy.

I addressed also a letter to Mr. Clarence B. Moore, whose archæological work in Florida is so well known and appreciated. The following is his reply:

"My mound work has been almost entirely confined to Florida, where I have opened about one hundred and twenty-five mounds, nearly all of which I have totally demolished. My experience, then, relates only to Florida.

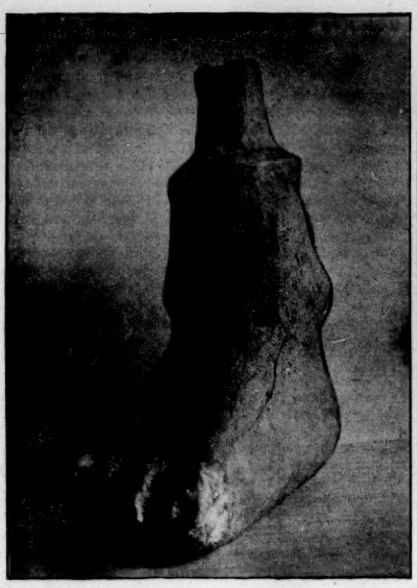
"I have found a considerable number of pathologic specimens during my five years of exploration. In referring to these specimens I shall exclude all cases of fracture, as I take it you are especially interested in diseased conditions of the bones.

"I have never seen any atrophy of the finger bones, such as was indicated in your photograph, but it must be remembered that in nearly all the Florida mounds the form of burial is of the bunched variety, *i. e.*, skeletal remains of bodies previously exposed until the flesh had left the bones were buried in little piles, or scattered throughout the mound. In these interments the long bones and crania figured principally. Bones of the hands and of the feet, the vertebræ, etc., are seldom met with. Nevertheless, in some of the largest mounds, burials in anatomical order were found.

"The question which principally interests archæologists is as to the occurrence of syphilis in pre-Columbian times. Dr. Joseph Jones in his 'Antiquities of Tennessee,' published by the Smithsonian, writes at considerable length to prove the existence of this disease among the men who made the stone graves and as these sepulchres are, I think, admitted by all to be pre-Columbian, he virtually argues in favor of the existence of syphilis among the aborigines previous to the coming of the whites.

"Dr. Jones wrote some time ago, and it has been shown that the specimens from which he drew his conclusions did not show positively the ravages of syphilis, but might have presented the same appearance through changes arising from other causes.

"Dr. Hyde, *American Journal of Medical Sciences*, 1891, has treated in an interesting and sensible way



Huacos pottery, evidently an amputated foot. Wine or water bottle, exhumed with Peruvian mummy, said to be pre-Columbian. Bandelier collection, American Museum of Natural History.

the occurrence of this blood disorder, under the heading, (I think) 'Pre-Columbian Syphilis.' Dr. Hyde arrives at the conclusion, as I remember the paper, that it would be absolutely necessary to show they were unmistakably syphilitic bones encountered in the mounds, that these mounds were of unquestionably pre-Columbian origin. To this I might add (I do not recall whether Dr. Hyde refers to it) that in mounds of great age are often found intrusive, or secondary burials. Within the past week I have exhumed a body with remnants of clothing and feathers belonging to a pillow. Later Indians, as for instance the Seminoles, who were doubtless infected, may have been buried in mounds, while to my knowledge negroes and whites have been buried in ancient tumuli. These burials, however, are never over three feet below the surface and by careful observation as to depth all chance of basing conclusions on late burials may be excluded.

"The question of pre- and post-Columbian mounds is warmly debated by archæologists. The Smithsonian, all of whose work is done by agents while conclusions are drawn at desks one thousand miles away, believes in the existence of many post-Columbian mounds of importance. On the other hand *all* independent field-workers, such as Professor Putnam, Cushing, Moorehead, Fowke, Thurston, of Tennessee, and, in an humble way, myself, have yet to find any thing in a mound of importance, much below the surface, which in any way indicates contact with the whites. I am not speaking now of Florida, but of the entire country. Articles distinctly European are glass, glazed earthenware, iron, lead, pewter, brass, bronze, etc., etc. The Smithsonian has maintained that the copper of the mounds must be largely European and the mounds consequently of a late date. A recent writer, however, has pointed out that it is

Mutilated foot of leper, two toes remaining. From Dr. Morrow's collection of photographs of leprous deformations.

untenable to suppose that aborigines having intercourse with Europeans and obtaining copper from them should bury this copper, with a great variety of objects *all* distinctly aboriginal, and has, moreover, by a cloud of analyses shown that the copper of the mounds is pure native metallic copper, to which the aborigines had access and which is highly malleable and that this mound copper has nothing in common with the products of the imperfect smelting processes of the highly arsenical European sulphides, used during the fifteenth, sixteenth and seventeenth centuries.

"In Florida, in mounds of considerable size, a number of feet below the surface, beneath undisturbed strata, associated with objects of aboriginal art only, I have found a considerable number of long bones which had suffered from periostitis and osteitis of both the rarefying and condensing forms, as shown by general enlargement of the bone with irregularities of the surface, local nodular swellings, roughening

and spiculation of the surface, etc. None of these bones have been submitted to thorough examination by experts, and it is therefore impossible to say positively whether any show the marks of venereal trouble.

"At the present time, both archæologists and physicians are inclined to attach little credence to the existence of pre-Columbian syphilis.

"Most of my specimens are at the Academy of Natural Sciences, 19th and Race Streets, Philadelphia, where Dr. Dixon, the Curator, would doubtless be happy to have you examine them. I have written at considerable length as I have always maintained that the opinion of any one is valueless unless it is based upon substantial facts." . . . . . .

Dr Prince A. Morrow, ex President of the American Dermatological Association, who examined personally and very carefully the lepers of Molokai, Sandwich Islands, and who is, I believe, the highest authority on leprosy in this country, does not remember seeing a leper who had lost his upper lip, nor does he think that such a loss is a leprous manifestation. He thinks, as I do, that if the authors of those *huacos* potteries had intended to represent leprous phenomena, we should find in their work mutilated fingers and toes. In the American Museum there is a *huacos* pot[1], a wine bottle in the shape of a naturally sized foot, with circular flap removed from the top of the bottle, the bone representing the top of the bottle. The foot is represented swollen, with toes placed on the end in a peculiar way, but with nails showing naturally. Evidently some disease is meant which required amputation. Dr. Morrow kindly allows me the use of one of his photographs that of a leper foot (not requiring amputation, however). You will find side by side here the photographs of the bottle and that of Dr. Morrow, the latter belonging to a Sandwich Island leper. The only difference is, as will be seen, the presence of every toe on the bottle, while the photographed leper foot shows but two toes remaining. This lack of mutilation and the amputation show to me that it was not leprosy which the potter wanted to represent.

(To be continued.)

SOCIETY PROCEEDINGS.

American Electro-Therapeutic Association.

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept. 25, 26, and 27, 1894.

WILLIAM J. HERDMAN, M.D., President.

(Continued from page 726.)

DR. ROBERT NEWMAN, of New York, read a paper on

SUPPLEMENTARY REPORT ON THE SUCCESS OF ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURES.

Up to date, electrolysis in the treatment of urethral strictures has been successful in the same manner as practiced by me for over a quarter of a century and reported last in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, April 15, 1893.

Therefore, I have nothing to retract but only to confirm former statements. In addition, I published in the *Times and Register*, Jan. 21, 1893, the statistics of one hundred successful cases treated by Dr. F. S. Crossfield, of Hartford, who wrote the following: "I have practiced electrolysis for the treatment of stricture of the urethra upward of eight years with success. My synopsis of one hundred cases and observations coincides with the published statistics of Dr. Robert Newman, of New York. My cases were all seen in private practice. Those reported were not selected cases, but taken in order of occurrence . . . . taking the cases as a whole, together with those of Dr. Newman, it establishes the practical value of the method."

In the same number of the *Times and Register* appeared separate reports of successes of electrolysis in urethral strictures by Drs. W. H. Walling, F. H. Wallace, Wm. F. Hutchinson, Wm. R. D. Blackwood, J. B. Greene, Chas. G. Cannaday, O. S. Phelps and R. G. Nunn.

More communications have been received by Dr. E. L. Stephens, Fort Worth, Texas; Wallace, of Boston, and Dr. A. R. B. Booth, of Shreveport, La., who reports one hundred cases, with a complete cure of 80 per cent.

The theory of electrolysis is based on sound scientific principles; it causes a galvano-chemic absorption of the stricture, through the mucous and submucous tissues, by the direct action of the negative pole with weak currents of from 3 to 5 milliampères.

Practical experiments have demonstrated the electrolytic action beyond a doubt. The theory has been practically applied with good results in thousands of authentic cases.

In the *Times and Register* of Philadelphia, of April 8, 1893, I reported a compilation of 1,755 successful cases by 54 different operators, all of whom vouch for the correctness of their statistics, which proves that the electrolysis under consideration is widely practiced.

The same number of the *Times and Register* brings additional successful cases by Drs. G. Howard McFadden, F. H. Wallace, W. R. D. Blackwood, C. A. Bryce, and from the following editorial is quoted: "The statistics accumulated by Dr. Newman if all were reported, would cover a list of over 2,000 cases of urethral stricture treated by the electric method. In the face of such a mass of positive evidence, one is tempted to explain the dissent existing by the application of the personal equation. Still, every one has his right of opinion and free expression; and if the opponents of this method desire it, the columns of the *Times and Register* are equally at their service."

Dr. F. B. Bishop, of Washington, D. C., has reported more successful cases in the *Virginia Medical Monthly*, June, 1893, in which he says: "After a constant experience of eight years, I am thoroughly convinced that the treatment of the urethra by electrolysis is the best method now known to the profession."

In another part of that article Dr. Bishop says: "Dr. Newman, of New York, has used this method about twenty-six years, and during that time, according to his statement, he has treated numbers of cases with uniform success. Leading surgeons throughout the country have been severe in their criticisms of the Newman method, and have cast a shadow of doubt upon the claims of Dr. Newman. On the other hand, he has been supported by many men of prominent standing in the profession, both in this country and in Europe, who have taken the trouble to master the method, and have practiced it successfully. Some of the critics, I think, have been rather unfair to Newman, inasmuch as they are hardly inclined to give him credit even for sincerity in the report of his cases cured, but content themselves with a wholesale condemnation of his method, because they have tried it a short time and failed to cure their cases."

This most candid statement of Dr. Bishop only proves that some of my critics are unjust in doubting statistics without having any proof to the contrary. My statistics are given in good faith, most of them based on documentary evidence, which consists of publications in medical journals by well-known authors and of original letters in my possession, as well as the evidence of patients, and concurrent opinion of their family physician, either by witnessing the operation or examining the patients before and after the operation; by the final results, no relapses having occurred after patients have been discharged as cured. Some patients have been under observation and re-examinations for eleven years.

Some of these documents are here for inspection, and one particularly will be of interest to show what means have been used to mystify facts.

Permit the introduction here in brief of only one fact: Dr. K., the staff editor of *Genito-Urinary Surgery*, in the annals of the *Universal Medical Science* for 1890, vol. III. Sec. E, pages 15 and 16, tried to make believe that a Dr. Sanders, whose letter I had published, did not exist or was incorrect. That letter was written and published in 1885. With apparent design, after the death of this physician and a lapse of about four years from the date of the letter, Dr. K. wrote a

[1] Bandelier collection.

"polite note" (as he styled it) to that physician. This note, as could be expected, was as politely returned by the postmaster, who evidently declined to assume the responsibility of forwarding it to its destination, and the critical investigator closed his report with the triumphal words: "If the testimony of all the letters in support of electrolysis is no more accurate than that furnished by the letter of F. F. Sanders, it is poor indeed. The inference is obvious, etc."

Now, Mr. President, in answer to this editorial mystification, I am pleased to produce here the original letter of Dr. Sanders, attached to a sworn affidavit acknowledging its genuineness and Dr. Sanders' handwriting. That affidavit is subscribed by a notary public, and the latter's standing as such and his signature is certified by the county clerk, who has affixed his official seal. Next I produce here a letter from the sister of the deceased, who also acknowledges Dr. Sanders' writing and recollects the case he cited. And last, here is a letter from the Secretary of the Medical Society of Morris County, N. J., saying, that Dr. Sanders was well known in Morris County, had been one of the founders of the said Society and in 1885 was elected an honorary member. Now what was Dr. K.'s motive? Is the inference obvious?

All the letters quoted as original are now in my possession as documentiary evidence, as well as other evidental matters, but it is impossible to show the same to every member of the medical profession, neither can I have every one certified to by notary publics and county clerks. Therefore I was pleased that the matter has been settled by a committee of this Association, which was appointed to investigate my statistics. This committee have pursued their investigations for nearly a whole year, very carefully and impartially examined the documentary evidence, read the letters concerning it, corresponded with former patients and their physicians in America and Europe. The final report in the transactions of the American Electro-Therapeutic Association for 1893, page 40, was verbatim: "We have examined the records of Dr. Newman's cases and regard his conclusions as well sustained by the statistics, and as far as our experience in this line of work adds further testimony, it is confirmatory of the value of the continuous currents in resolving a large class of urethral strictures, etc."

This report is signed by Drs. A. H. Goelet, Wm. J. Morton and W. J. Herdman. That under some circumstances some medical critics throw doubt on the correctness of the statistics, appears almost as a willful libel.

To succeed with electrolysis in urethral strictures the operator must be a good physico- and physiologic electrician as well as a genito-urinary surgeon. Operators using old methods naturally can not be successful. If some do not succeed with electrolysis, that proves nothing else than the individual failure, which may be due to the operator, false diagnosis, to faulty instruments, and such failures or negative results do not invalidate the records of successes, all perhaps due to ignorance. The old methods in genito-urinary surgery are too severe, and it is to be hoped that the future handling of these cases will be more gentle, with less blood pools, less pain, and less or no cutting.

The principal points in managing urethral stricture are: a correct diagnosis, gentle handling causing no pain; and for the operation of electrolysis, a galvanic battery, good electrodes, the negative electrode used to the stricture, weak currents, long intervals, using only one instrument at a séance, and never to operate while the parts are in a state of acute inflammation.

I can not approve nor adopt some alterations of my method which some electro-therapeutists have proposed, which consist of stronger current, different pole to the stricture, frequent séances and severe measures.

Some have reported good results from faradic currents. My experience is, that the faradism rightly applied may act as an anesthesia and relieve spasm, but it never had any action to absorb or cure a stricture of the urethra.

If operators follow this advice we will hear of less failures, and electrolysis as a chemic action is a fact which can not be denied. Therefore, electrolysis must be a success.

DISCUSSION.

DR. BEAVER said that he had used the conical bougie and also the steel sound. He had invariably found on questioning the patient carefully that the current was felt at the spot where the sound entered the stricture. He had been unable to see why there should be any difference in the physiologic effect between the conical bougie and the steel sound, and indeed his experiments had led him to believe that he had obtained cures even more rapidly by the use of the steel sound than by the instrument recommended by Dr. Newman.

On motion of DR. WALKER, the courtesies of the floor were extended to DR. FRANK W. ROSS, of Elmira, N. Y. DR. ROSS said that for eight years he had employed electrolysis for urethral stricture and with success. His attention had been first called to it by a paper read by Dr. Newman before the New York State Medical Association. In the first case, one of acute stricture, he had succeeded with the static current in obtaining relaxation of the stricture and evacuation of the bladder, although he had been unable to pass the smallest catheter into the bladder before this. Since then he had employed Dr. Newman's method of treating urethral stricture by the galvanic current. He thought the medical profession were well aware of the success of this method, and that many physicians were using it. He had tried both the conical bougie and the steel sound and had been more than pleased with the results obtained with both. In conjunction with Dr. Squire, of Elmira, he had treated a number with the steel sound, and he believed the results were better than those obtained by the use of the olive-pointed instrument. The reason appeared to be that all neoplasms offered less resistance to the passage of the current and the tissue was readily absorbed. He also believed a cure obtained by electrolysis was a physiologic cure, while the cure by cutting was not physiologic. He felt positive that the steel sound could be used, although Dr. Newman objected not only to the cure of stricture of the urethra by this means, but to curing them so rapidly.

DR. F. B. BISHOP, of Washington, D. C., said that he thought that Dr. Newman had conferred the greatest blessing on humanity by his method for the cure of urethral stricture. He had employed the method for about ten years, and was well aware that it required experience in the use of electricity as well as in the manipulation of instruments in the urethra. Much care was necessary to avoid causing irritation and spasm, and great caution should be exercised to avoid employing too strong a current. At first he had met with numerous failures, but within the last two years he had been pleased to have those same individuals return to him and be cured. He had never used the steel sound, for it had not seemed to him that there would be a proper concentration of the current on account of the large amount of surface exposed in the urethra.

DR. WALLACE, of Boston, said that he wished to say a word in corroboration of what Dr. Newman had said. He had been using this treatment for the last five years, and could not recall any cases in which he had had better success. He had not used the sound at all. The only difficulty he had found was in cases where it was impossible to get any electrode through the stricture. In cases of stricture of crescentic form, he had found it advantageous to allow electrolysis to take place on the *withdrawal* of the electrode. He had treated some cases in which there was still quite a little inflammation present. Using a current of about 1 milliampère he had found that a few treatments would relieve the irritation and enable him to pursue the treatment more vigorously in the course of a few days. Within the past year he had treated a patient who had been previously treated by urethrotomy twice. Only a No. 7, French, could pass at first, but as a result of electrolysis he was now able to pass a No. 27, French, there was no perceptible sclerosis and he was able to control urination, which he had not been able to do when the treatment by electrolysis was begun.

DR. BEAVER said that the statement which he had made about the use of the sound was not theory but was based upon facts given by the patients, and any one present could verify them. They had all, without exception, stated that the sensation produced by the current was felt *at the location of the stricture.*

THE PRESIDENT said that the physical facts would be rather against the localization of the current in that way. One could not always place much reliance on the statement of patients, especially as regards localizing sensations, and it would seem strange if the current should concentrate itself at the stricture when a large surface of electrode was exposed.

DR. ROSS remarked that it had been demonstrated very clearly that all neoplasms offered such resistance that the current was concentrated in their locality.

DR. DICKSON said that in cases of goitre, if the edges of the clay pad pressed more firmly than the rest of the electrode, a greater effect would be produced by the current at that point. This might possibly explain the patient's localizing the sensation at the seat of stricture. Where there was the closest apposition there would be the greatest concentration of the current.

DR. BEAVER said it had often been his experience that one

edge of an electrode could press more firmly than the rest, and so cause blistering. Although he had treated cases in which the strictures had occupied very variable positions, the sensation had always been localized by the patient as stated.

DR. NEWMAN, in closing the discussion, said that a stricture was a pathologic condition, and if a sound were introduced into the urethra and through the stricture, the pressure that it made against the stricture would be sufficient to explain the fact of the patient localizing the sensation there. One of the speakers had admitted that this method placed in our hands the means of curing by rapid dilatation—this was just what he did not want. The electrical current would be diffused over the whole surface of the ordinary sound instead of being concentrated at the seat of the stricture. What we desire is an electrolytic and absorbent action. With the instrument he devised and employed, the current was not only applied to the stricture, just where it was wanted, but he was able to feel the exact position of the instrument, and without making pressure could ascertain when the current had sufficiently dilated the stricture to admit of the further passage of the instrument. It was this that he desired; it was mechanical pressure that he wished to avoid. The conical sound would pass through and beyond the stricture, and electrolysis would be exerted beyond the stricture and not simply at the stricture.

DR. R. J. NUNN, of Savannah, Ga., read a paper on

BEHAVIOR OF CANCER UNDER MILD GALVANIC CURRENTS.

It is undoubtedly a fact that benign tumors can be absorbed to a greater or less extent through the influence of galvanic currents, although the manner in which the absorption is brought about is still debatable ground among electro-therapeutists; but observations on the action of mild galvanic currents upon malignant tumors are sufficiently rare to induce me to place before the Association the narrative of the following case:

The patient, a lady of 60 years of age, had had a tumor in the left mamma for about five years before she came under my care. Upon examination, a nodular tumor measuring about two and a half inches horizontally by about two inches vertically was found in the outer side of the left breast. The axillary glands of the left side were enlarged and those of the right side were likewise implicated. The tumor had increased in size very rapidly within the last few months, certainly doubling its size within the last two or three. The patient was cachectic and her general appearance conveyed the impression of grave constitutional disturbances. The kidneys were not involved. It was quite evident that in such a case any course of treatment which would deplete the system or subject the patient to shock was utterly out of the question, and hence surgical interference of any kind, whether by the knife, electric or other cautery, was decided to be inadmissible. Under these circumstances it was determined to try the effects of mild percutaneous galvanic currents applied frequently and in as large quantity as possible.

A sheet-lead electrode with a lint pad extending about an inch in all directions beyond the tumor was prepared, to be used for the negative pole, while a foot bath for the feet and a lint-covered lead electrode for the hands served as positive. Thus arranged, such a current as the patient could bear, varying from 50 to 100 milliampères, was passed daily. The negative was also applied by the hand electrode to the axillary glands, the whole treatment occupying less than half an hour. Daily for some months this treatment was kept up, and there was then a marked improvement; the axillary glands had almost disappeared and the mammary tumor had not increased in size one particle; it had lost much of its nodular character and the edges instead of being hard and sharply defined were now softened and shaded off into the sound tissue around. But unfortunately my patient could not estimate the progress of the case as did her doctor, and in an evil hour yielding to the glittering promises of a "faith curist," discontinued her galvanic treatment. Again five months, during which the "faith curist" got in her fatal work of inaction and the case returned to me. Now mark the change; the tumor (2½ x 2 inches) which had rather diminished and changed in character by five months of galvanic treatment, had now increased to the enormous dimensions of 13 x 9 inches, with an ulcerated surface in the center exceeding in size the original tumor; the left axillary glands were greatly swollen and the whole left arm and hand tumified until it was practically immovable. A small tumor a little more than an inch in diameter had also appeared in the right breast, and the glands of the right axilla were quite enlarged. The pelvic organs were also involved, and micturition was difficult. The patient now despaired of relief, and was content to make herself as comfortable as possible until the end, which came a few months later.

The conclusion which has forced itself upon my mind through the observations made on this case is, that carcinoma can be benefited by mild galvanic currents of large quantity frequently applied percutaneously.

DISCUSSION.

DR. WALLACE asked if Dr. Nunn had used cataphoresis in connection with the galvanic current. During the past year he had himself employed mild currents with cataphoresis on a case which had been diagnosticated by two surgeons as carcinoma. He had used cataphoresis with iodide of potassium, passing the iodine through the tumor. After twelve treatments the tumor began to diminish, and it had now entirely disappeared.

DR. LUCY HALL-BROWN said that probably many of the members had from time to time dispersed tumors of the breast which gave evidence of being carcinomatous, and yet because they had disappeared there had been a doubt thrown on the diagnosis. In the case reported in the paper, the fact that electrical treatment had been interrupted and the condition finally proved fatal prevented any such doubt being thrown upon the case.

THE PRESIDENT said he had had two cases in point. Formerly, he had been of opinion that by the use of from 15 to 20 milliampères of current these tumors of the breast could be removed. At one time a patient had come to him from Kansas with a tumor of the right breast about the size of an English walnut. The treatment, as outlined, was tried, and he had had the satisfaction of seeing that tumor entirely disappear within two months. From the stinging in the breast and the retraction of the nipple he had felt that it might be malignant. She was told to return if there was any recurrence, and she did so in about six months, with a tumor of about the same size as the first one, and in the same location. A second trial was entirely unsuccessful, and the tumor went on and involved the entire breast. The breast and axillary glands were removed by operation, yet within a year she died of carcinoma of the liver. Recently he had had a second case, which he had at first looked upon as benign. The family history was excellent. The tumor involved the left breast, and was not adherent to the muscle or the skin, and the glands in the axilla were not involved. The electrical treatment was tried almost daily for four or five months, using a current of 20 milliampères. The only effect was an interference with the circulation about the growth, and the production of slight absorption surrounding the growth, but not of the growth itself. Removal of the breast was advised, but the patient would not consent for two or three months, and at the time of the operation it was found that the axillary glands were involved and that the growth was a carcinoma. He felt that the *first* tumor in the first case was not malignant, but was perhaps a temporary obstruction of the ducts.

DR. NUNN, in closing the discussion, said he had not used cataphoresis in this particular case. The only value of the paper was to show that the tumor really was a carcinoma, as had been so well appreciated by Dr. Brown. It was because of the certainty of the diagnosis that it was interesting to observe the effect of the electrical treatment.

(To be continued.)

SOCIETY NEWS.

The American Pediatric Society will hold its seventh annual meeting at the Virginia Hot Springs, May 27, 28 and 29, 1895. The society will be the guests of the Virginia Hot Springs Company.

Address by the President, F. Forchheimer, Cincinnati, Ohio.

Cerebro-Spinal Meningitis in an Infant six days old, by T. M. Rotch, Boston, Mass.

Purulent Otitis Media, which ended fatally (three cases), by Wm. F. Lockwood, Baltimore, Md.

Pyo-Pneumothorax (case), by Walter L. Carr, New York City.

Traumatic Aphasia; Scarlatina Anginosa; Croupous Pneumonia (case), by Samuel S. Adams, Washington, D. C.

Hyperpyrexia (cases), by Henry D. Chapin, New York City.

Sarcoma of Kidney in an Infant (case and specimen), by J. Henry Fruitnight, New York City.

Lympho-Sarcoma of Spleen (case and specimen) by George N. Acker, Washington, D. C.

Tetanus Neonatorum, by J. Lewis Smith, New York City.

Infantile Tetany, by M. P. Hatfield, Chicago, Ill.

Tetany (two cases), by Floyd M. Crandall, New York City.

Amyloid Disease in Children, by B. K. Rachford, Cincinnati, Ohio.

Typhoid Fever in Infants under 2 years—Is it frequent? Wm. Perry Northrup, New York City.

The different forms of Eruption which Simulate Scarlatina, and their differential Diagnosis: *a*, Some forms of Eruption Simulating Scarlatin.,by A. D. Blackader, Montreal, Canada; *b*, Scarlatiniform Exanthem, by Charles G. Jennings, Detroit, Mich.; *c*, Scarlatina, with intensified Eruption and poorly marked Constitutional Symptoms (several cases), by Louis Starr, Philadelphia, Pa.; *d*, Extensive Gangrene following Scarlatina, by James C. Wilson, Philadelphia, Pa.; *e*, Difficulty in Differential Diagnosis, by J. P. Crozer Griffith, Philadelphia, Pa.; *f*, Local Treatment of the Skin in the Eruptive Fevers of Children, by A. Seibert, New York City. General discussion.

Case of Adherent Pericardium in Children, with Enormous Heart Hypertrophy, Chronic Proliferative Peritonitis and Recurring Ascites, by William Osler, Baltimore, Md.

A Rupture of the Bladder (case and specimen), by John Dorning, New York City.

Cardiac Anomalies: *a*, Cor biloculare; *b*, Pulmonary Veins opening into Right Auricle; *c*, Imperfect Ventricular Septum in a Man, aged 45 years, by William Osler, Baltimore, Md.; *d*, Aorta arising from the Right Venticle, by George N. Acker, Washington, D. C.; *e*, Patent Ventricular Septum, by A. Jacobi, New York City.

The Characteristic Features of the recent Epidemic of Grippe—1894-95: *a*, Pulmonary Manifestations; *b*, Aural Manifestations; *c*, Glandular Manifestations. Discussion by L. Emmett Holt, Wm. Perry Northrup and Henry D, Chapin, of New York City, and A. D. Blackader, of Montreal, Canada.

Antitoxin in Diphtheria: *a*, Results in Laryngeal Cases; *b*, The Cause of Death in Fatal Cases; *c*, Efficiency for the purpose of giving Immunity; *d*, Immunizing Effect of Antitoxin in Diphtheria, by F. Gordon Morrill, Boston, Mass.; *e*, Personal Experience with Diphtheria Antitoxin and Blood-Serum Injections, by Augustus Caillé, New York City; *f*, the value of the Antitoxin of Diphtheria and its Toxic After-Effects, by A. Seibert, New York City.

Cases Apparently Diphtheria, but in which the Diphtheria Bacillus is not found, by E. M. Buckingham, Boston, Mass.

Cases of Scurvy, by A. Jacobi, New York City.

Chicago Ophthalmological and Otological Society.—Regular meeting held at the Saratoga April 9, 1895, DR. HOTZ in chair. There were eleven members and visitors in attendance.

The minutes of the last meeting were read and approved.

The applications of DRS. W. R. FRINGER and A. B. HALE were referred to the Committee on Membership.

DR. GRADLE showed a man of 40, who in February, 1895, contracted a severe cold in the head but had no symptoms of grippe. A few days later he had vertical diplopia which, however, disappeared shortly, and the lateral diplopia appeared. When first seen, March 26, with the exception of a slight lagophthalmus, there was no evidence of any paresis of the facial nerve. There was slight ptosis; complete paralysis of the external recti but other muscles all right. To-day he can move eyes outward somewhat. March 26, there was marked vertical nystagmus, now gone, but lateral nystagmus on looking to the side. Some dimness of vision March 26, now gone. Both knee jerks are exaggerated; there is decided fibrillary twitching of the orbiculares; color vision and fields are normal; pupils and fundi normal. Is taking large doses of potassium iodid.

DR. HOLMES had a case, a woman 50 years old, who had very severe paralysis with diplopia following grippe. She recovered under tonics.

DR. MONTGOMERY has a young man, healthy, who had, without apparent cause, paralysis of all external muscles except superior oblique of right eye. He took 700 grains potassium iodid a day without effect, but is now improving under galvanic treatment.

DR. BETTMAN reported two cases of grafting by combined pedicled flap and Wolfe flap. Both cases were very large flaps but adhered nicely with good appearance.

DRS. WILLIAMS, MONTGOMERY, and GRADLE had found that any kind of graft shrank very much in time.

DR. HOTZ prefers Thiersch grafts because they do not leave so much thick skin, except where it is possible to use scar tissue with a pedicle.

DR. COLEMAN reported a case of hemianopsia. Woman, 18 years old, good personal and family history. Seven weeks ago, on awakening in the morning, noticed she could see but half an object; also noticed an appearance as of a lighted match waved before the eyes, producing silvery waves. This was followed in about an hour by pain through the temples and then vomiting of greenish fluid. Had been under medical treatment for a cold or grippe for five weeks and had to stop work. Has had no headache for seven weeks, no loss of memory, feels very well, works as well as before attack. Fundi normal; fields right, up, down, and in, normal; out, contracted to 10 degrees; left, up, down, and out, normal; in, contracted to 5 degrees. V. in each eye 20—15. Wernicke's "hemiopic pupil" reaction more marked in right eye. Diagnosis: lesion in visual center posterior to oculo-motor nucleus.

DR. GRADLE spoke of the significance of the odor of the discharge in chronic suppurative catarrh of the middle ear. He had noticed that the disappearance of odor is the first evidence of benefit of treatment. He begins with thorough cleansing, inflation and insufflation of boric acid. If the odor has not disappeared after these treatments he feels sure that the case can not be cured by this method. He then syringes the middle ear by canula if possible; if this does not suffice, he syringes through Eustachian catheter. If necessary, alcoholic or ethereal solutions of iodoform are used and then scraping of carious spots with spoon. He has found peroxid of no more value than water.

DR. WILLIAMS spoke of a case recently examined for color vision, where the man could pick out all the greens, if told to pick out green, but could not pick out all to match the Holmgren green when no name was given. This man also could name a light red lantern without a mistake but called a dark red one, green. This case shows the value of different tests and also of standard colored glass. Dr. Williams also showed a modification of Buissen's photometer.

Society adjourned by limitation.

C. P. PINCKARD, Secretary,
103 State Street.

NECROLOGY.

JULIUS KAEMMERER, M.D., of Atlantic City, died May 13, in the sixty-sixth year of his age. He was a native of Germany, was educated at the University of Heidelberg, studied and practiced at Paris, but came to this country about 1860. He lived in Philadelphia twenty-four years, going thence to the above-named city about twelve years ago. The fatal illness was referred to pneumonia.

JOHN CONDIT HALSEY, M.D., of Brooklyn, died at the ripe age of 80 years, from infirmities due to old age. He was a native of the city named and was educated there and in New York City. In 1834 he graduated in medicine at the College of Physicians and Surgeons, after which date he was for a half century an esteemed family practitioner in the city of his birth. He retired from practice about ten years ago, being led to that step by reasons referable to physical disability. He was one of the oldest living members of the Kings County Medical Society and of the Physicians' Mutual Aid Association.

J. HENRY LEONARD, M.D., of Chicago, May 19, aged 28.——M. H. Henry, M.D., of New York, May 20, aged 59.——G. W. Cooper, M.D., one of the founders of Garnett, Kan., May 16.——F. E. Crosby, M.D., of Jackson, Mich., May 16.——W. H. Winter, M.D., of Princeton, Ill., May 15, aged 69.——G. W. Talbot, M.D., of Denver, Colo., May 15.——J. W. Larrabee, M.D., of Skidmore, Mo., May 10.——Oren T. Maxon, M.D., of Evanston, Ill., May 9.——William Waite, M.D., of Kappa, Ill., May 17, aged 30.——J. H. R. Wolfe, M.D., of Baltimore, Md., May 14, aged 65.——M. S. Coffman, M.D., formerly of San Francisco, at Solomonville, Arizona, May 5.——W. N. Green, of Webster City, Iowa, May 9, aged 39.

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SATURDAY, MAY 25, 1895.

A WELCOME ALLY.

What another esteemed contemporary journal[1] styles "the mother of all journals of medical associations," to-wit, the *British Medical*, devotes a leading article in its issue of the 4th inst., to a discussion of the subject of a Department of Public Health for the United States and of the action of the AMERICAN MEDICAL ASSOCIATION to this end. The article is judicious, well-timed and gratifyingly appreciative of the situation. After reciting the various preliminary steps that the ASSOCIATION has taken in this matter, and recognizing the excellent work done in the field of public hygiene and preventive medicine through the agency of different medical departments connected with the public services and scientific bodies, it is contended that the Government can, in a wider way, promote the public welfare by creating a Department of Public Health, "the head of which should be a physician, a member of the Cabinet and on a position of equality with the heads of the Government Departments."

It is shown that the work of such a Department, as set forth in the bill advocated by the ASSOCIATION, may be regarded as covering all that is done by the Medical Department of the Local Government Board in England, by the Registrar-General's Department, and by the Factory Department of the Home Office; and that it is intended to be provided with the machinery for compiling information for the purposes of the various State and other bodies on a multitude of social and health subjects, including the questions of food supplies, intemperance, prostitution, elementary education, etc. The *Journal* adds:

"It is not to be wondered at that the AMERICAN MEDICAL ASSOCIATION and the leading members of other learned bodies in the States should regard this question as one of prominent importance. However the matter may be explained—and we do not doubt that there are certain political explanations—the fact remains that the great nation across the Atlantic is distinctly behind the times in not having a central Public Health Department. Almost every year such departments in older and much smaller countries are being either created or re-organized on such a footing as to make them of real service for the purposes of the public and the State. These departments are also placing themselves more and more in evidence every year by means of annual reports on their proceedings. In the United States the place of such reports has hitherto been largely taken by the annual volumes of the various State Boards of Health, but these vary very much in character, and many of them are coming to be mainly concerned with matters of local interest. It would, however, be otherwise were the vast amount of information available through the State Boards and other bodies sifted and formulated in a form for general use. The States would, under such circumstances, have material at their hand such as few other nations possess."

MR. ERNEST HART recently went to India and stirred up the red-tape animals in that country to good effect in the interest of the profession. Still later—in the last issue of the *Journal* received, that of May 11—he roundly scores His Royal Highness, the DUKE OF CAMBRIDGE, Commander-in-Chief of the British forces, for the manner in which he referred, in an after-dinner speech, to SURGEON-MAJOR ROBERTSON, one of the most heroic of the heroic defenders and relievers of Fort Chitral, as "that brave civilian." MR. HART does not hesitate to characterize the phrase as "a wanton affront to the medical officers of the Army," and boldly warns H. R. H. that the matter will not be allowed to rest, that his dictum shall not pass unchallenged. MR. HART has long been credited with the courage of his convictions, but nothing less than the most profound conviction of the lofty character of the profession, the keenest jealousy for its honor and zeal for its advancement could inspire the courage necessary for this outspoken censure of a Royal Personage. MR. HART may paraphrase the utterance of the poet TERENCE and say:

MEDICUS *sum:* MEDICINI *nihil a me alienum puto.*

On behalf of the AMERICAN MEDICAL ASSOCIATION, its JOURNAL welcomes him as a potent ally in our battle for a Department of Public Health.

THE SOCIAL POSITION OF THE MEDICAL PROFESSION.

Every now and then some medical journal gives us a dismal editorial about the social position of the medical profession; about the lack of influence of the doctor in public affairs; about the inferior rewards of a medical career; or about the over-production of doctors; and then each writer falls to wondering why young men will still insist upon studying medicine. The most plaintive and doleful of these lays appear in certain of our contemporaries on the Eastern fringe; and they are pitched in so dismal a strain that one unconsciously feels that the writer must have chronic dyspepsia or a twinge of colic. The British journals have always been the

[1] The Provincial Medical Journal of Leicester, England, May 1, 1895.

loudest croakers on this score—because forsooth the Queen, when she is making peers does not make her PAGETS, and her CLARKS, and her LISTERS, lords or cabinet ministers instead of ordinary knights and baronets, like brewers and bankers and other common cattle—as if the class to which ISAAC NEWTON and HUMPHREY DAVY belonged was not good enough for anybody, or as if it could add anything to the fame of a JOSEPH LISTER to be a cabinet minister or belong to the "PRINCE OF WALES set." Perhaps our home journals, with just a suspicion of anglomania, take their cue from their British confrères.

These lamentations are as weak as they are indiscreet, and it is hard to find any other reason for it than the inherent tendencies of men to complain. It is hard to get rich in medicine, or to gain social or civic recognition, or to become intellectually prominent, just as it is in every other walk of life. There are too many doctors, as there are too many lawyers, engineers and architects; but in comparison with all these, we trust our modesty will be pardoned, when we say that it has always seemed to us that the doctor had a little the best of the bargain, both in a material and a social way.

As to the doctor's social position, it is not evident that he ever had to sit at the lower end of the table. Great medical men have continually occupied positions commensurate with their abilities. Even in England, where every one, like "little Tommy dearly loves a lord," it is hard to see where the doctor has failed to hold his own. Going as far back as HARVEY, we find that he was a rich man, the favorite brother of rich London merchants and the associate of his king. Rough JOHN HUNTER was the friend of the courtly SIR JOSHUA REYNOLDS, and RICHARD MEADE a favorite of CHARLES II. SIR ASTLEY COOPER, throughout life a man of commanding social position, when 23 years old married a belle and an heiress—indeed, marrying heiresses has been a favorite avocation of doctors from the earliest times, one which, by the by, shows no sign of abating, and it is nowhere recorded that women, particularly rich women, are careless of social position. SIR HENRY HOLLAND was the acquaintance of all the great men and women of his time and the intimate friend of not a few of them. And coming to the present time in England, MORELL MACKENZIE seems to have stood pretty well with royalty itself. The DUKE OF EDINBURGH and SIR JAMES PAGET have been patrons, side by side, of all the notable charitable functions for twenty years. ANDREW CLARK was the intimate friend of GLADSTONE, who came almost from a sick-bed to give loving testimony to the memory of his dead friend and to the character of the profession which his friend had so highly adorned. And, considering for a moment the continental Europeans, every one at once remembers that BARON LARREY—he of the hip-joint amputation—was the intimate friend of NAPOLEON, who in his last will gave evidence of his sincere friendship by an appreciative message and a bequest of 100,000 francs. In Germany, ESMARCH's wife is aunt to the present Emperor.

As for the social position of the medical profession in America, it would seem that little need be said. As we have intimated, the doctor has usually seemed to us to have a little the best of it. He has certainly held his own from the beginning. DR. JOSEPH WARREN was the greatest loss of the battle of Bunker Hill. Old BENJAMIN RUSH was a signer of the Declaration—and if that isn't simon-pure American aristocracy, will some one please tell us what is? We have never seen any one who had the temerity to question the social position of the WARRENS or BIGELOWS of Boston, or of the DRAPERS, or JANEWAYS of New York, or of the WISTERS, or WOODS, or MITCHELLS, or PANCOASTS, or PEPPERS, of Philadelphia. And, coming down to individuals, take for example, VALENTINE MOTT, or ALONZO CLARK, or WILLARD PARKER, or MARION SIMMS, or FORDYCE BARKER, or POLK, or MCLANE, or the FLINTS, father and son, or DRAPER, of New York, or S. D. GROSS, or WM. PEPPER, or H. C. WOOD, or S. WIER MITCHELL, of Philadelphia, or OLIVER WENDELL HOLMES, or HENRY I. BOWDITCH, or J. COLLINS WARREN, of Boston. If there are any gentlemen whose standing in the community is better than these it ought to be made known.

One of the VANDERBILTS married a hospital interne, and we have no doubt that she could not have done better. And—if anything else is needed to make our happiness complete—the brilliant editor of the *Medical Record* was at the GOULD wedding.

But our pessimists say in reply to this, that this is all very nice, but fine words butter no parsnips, and all this has nothing to do with the rank and file of the profession. The fact is the average prosperity of the rank and file is the best answer to these imputations. The rank and file of the medical profession in this country hold a most powerful position. Some of the most enviable places in life that one ever sees are held by family doctors in good towns—and not always in large towns either. The first man in emergencies, the adviser in physical and in the most intimate domestic affairs as well, the one upon whom all depend, at the childbirth and at the bedside of the sick, the equal of any social position and the superior of most in mental and moral endowments, such a man, with his family, leads a life of the most solid satisfaction. His material prosperity is sufficient for his comfort; his surroundings are conducive to independence and happiness; his sons and daughters have good advantages; he himself has the inestimable satisfaction of knowing that he plays a large part in his community; and when he dies he

leaves a void, that if any gap in life were irreparable, would be irreparable. All doctors can not occupy positions like these, but the point we are making is, that in comparison with other men, the doctor has fnlly his share of these positions of influence and of reasonable prosperity.

We all know full well that the doctor's life is not all rosy; but the lack of social position or influence is not one of its objections. Like other men, the doctor is what he makes himself, socially and otherwise. His profession, if it has any weight as regards his social position is, we believe, rather in his favor. In fact, when one remembers some of the doctors of the type of MARION SIMMS and S. D. GROSS and FORDYCE BARKER—men of their type in large communities and in small—he is inclined to say, paraphrasing Sidney Smith on the strawberry, that doubtless God might have made a better man than a good doctor, but doubtless he never did.

THE EDUCATION OF THE JAPANESE HOSPITAL CORPS.

There is no reason why the Hospital Corps men of the Japanese Army should not be thoroughly educated, for ample provision in the way of books has been made for them. Three text-books on military nursing have been issued, and one on the use of the stretcher. The three are apparently graded and are probably intended for those who in Japan are the equivalents of our private, acting hospital steward and steward, as one consists of only 140 pages, while the second has 280 and the third 600 pages. To the professional eye, educated in the medical lore of our western civilization, the text of these volumes, consisting of pot hooks, hangers, gridirons, harps and other complicated hieroglyphics, conveys no suggestion of the subjects discussed.

Indeed a casual observer might consider the end of each book to be its beginning; but they are all so profusely illustrated that the said professional eye experiences no difficulty in following the whole subject from its beginning where we usually print "finis," to its end, where we usually have our title page. Most of the illustrations show their western extraction in the facial characteristics of the individuals represented, and on some are to be found our familiar Arabic numerals on points calling for explanatory text. There are, however, some original Japanese cuts, particularly in the litter-drill book. The largest volume contains most of the illustrations found in the others, excepting some of those relating to stretcher drill. First, we find full page front and back views of the male figure, with western numerals over the swelling masses of the well-developed muscles. Then follow the skeleton; the teeth showing crowns, bodies and fangs; the *écorché*, or flayed figure, teaching the location of the superficial muscles; the circulation through the heart and through the body, pulmonary and systemic; vertical sections of the eye and ear, and the thoracic and abdominal viscera *in situ*.

Thus far anatomy and physiology have evidently been discussed; but now we come to matters of practical interest: hemorrhage controlled by forced flexion at the elbow; digital pressure on the femoral, brachial, subclavian, carotid and facial arteries; the tourniquet on the brachial, ESMARCH'S tubing on the femoral and a handkerchief twisted by a sword bayonet over the same vessel. Dressings follow: the arm sling; four-tailed bandage for the chin; the triangular bandage with its pictures which ought sufficiently to explain its use, but these are supplemented by special cuts showing its application to the shoulder, elbow, hand, ankle, groin, scalp, etc.; the roller and its reverses on various parts of the body.

Next, fractures come in for consideration as evidenced by a wire cradle, metal leg splint with foot piece, extension by weights and SMITH'S anterior applied. SYLVESTER'S method of artificial respiration is illustrated, both at inspiration and expiration; but if MARSHALL HALL is mentioned his name must have been translated into unrecognizable hieroglyphics.

Field work follows: litters extemporized of poles and cords, rifles and overcoats; carrying patient to litter; two- and four-handed seats. After this, for nearly three hundred pages, the only illustrations are a spring scarificator and a cupping glass; military nursing is no doubt being discussed. The litter drill book repeats the anatomic illustrations and those relating to hemorrhage bandaging, etc. It shows the position of the squad at the open and closed litter and the wheel of the litter in changing direction. From the illustration showing the squad placing a patient on the litter, it is manifest that the Japanese Hospital Corps have not learned the best way. They rise with the patient to the erect attitude, in order to lay him down on a litter almost on the ground level. Truly, a doctor can gather much information from these volumes, although not a single word is intelligible to him.

THE HORNED MEN OF AFRICA.

For many years reports have been current of the existence of horned men in West Africa. In 1883 PROFESSOR MACALISTER, then of Dublin, now of Cambridge, collected the evidence accessible at that time.[1] At first the growths were thought to arise from the superior maxilla, and as this region is well known to be a favorite site for exostoses, it was supposed this so-called horned condition was caused by symmetrical exostoses. MR. JONATHAN HUTCHINSON has published in his "Illustrations of Clinical Surgery" a

[1] Proceedings Royal Irish Academy.

figure of a male European thus affected which closely resembles that of a horned man furnished by MACALISTER.

A great deal of light has been lately thrown on this condition by M. MACLAUD, a French naval surgeon serving on the Ivory Coast. In the *Archives de Medicine Navale et Coloniale* this author gives an account of seven cases he has observed. The affection is termed by the natives *Goundou* and *Anakhre* (big nose) in the Aqui language. His cases ranged from 8 to 65 years in age, and the tumors had existed from a few years up to thirty years. M. MACLAUD had one man under observation for several months, and describes the tumors as being symmetrical, as large as a hen's egg on one side and as a large nut on the other; they were ovoid, hard—a hypodermic needle would not pierce them—circumscribed, and occupied the lateral walls of the nose, extending from the root to the canine fossa, making part of the nasal, lacrymal and superior maxillary bones. There was no trace of tuberculosis, syphilis, leprosy or glandular swellings. Examination of the nasal fossæ showed the tumors to encroach on them. Smell was intact, but nasal respiration was embarrassed. Percussion of the tumors showed them to be hollow. This individual was a slave 20 years of age, who had been captured and carried to the Aqui country when about 8 years old—the tumor beginning to grow in a year's time after his arrival. The author mentions another case as being a horrible sight; this was an old man with a tumor on one side as large as an ostrich egg, on the other as a large orange; vision on the side of the larger one had been abolished for years, and the right eye had been forced from its orbit by the growth.

The affection begins in late childhood by epistaxis, cephalalgia and sometimes a muco-purulent discharge from the nostrils. At first the tumor is no larger than a bean, but, slowly increasing, is as large as an almond at 15, a pigeon's egg at 20, and so on. It never suppurates, and apart from the destruction of vision does not seem to occasion any inconvenience. M. MACLAUD thinks it probable the condition arises from lesions produced in the nasal fossæ by the larvæ of flies. He points out that the disease is not hereditary, and that it is confined to the forest region where flies abound. On his way home he saw a chimpanzee affected in a similar way, but lack of time prevented an investigation. The natives account for its origin by attributing it to the malevolence of a fetich *Jero* or *Zoré*, a statue of which carved in wood bears similar swellings; if appealed to too often the fetich, becomes irritated and inflicts these horns upon the annoying supplicants. Owing to this supernatural origin they use nothing save the usual remedies for all diseases—cataplasms of pimento or aromatic plants, bathing with pimento, etc.

In concluding his highly interesting paper, DR. MACLAUD states that one or two cases may be found in any village of 100 or 150 inhabitants.

A NEW ARMY STRETCHER.

A board of which COL. CHARLES H. ALDEN is President was convened at the War Department some time ago to investigate and report upon the form of litter found to be best suited for Army use, having in view economy, simplicity of construction, durability, lightness and adaptability for the services required. The board has submitted a new model for the consideration of the Surgeon-General, who, it is understood, will bring the specifications and a litter constructed in accordance with them, to the notice of the U. S. Military Surgeons at their meeting in Buffalo, N. Y.

The main object of the board was to lessen the weight of the litter without impairing the strength of any of its essential parts. The present regulation litter weighs twenty-four pounds; but the new model weighs only sixteen and one-half pounds, and if adopted will be the lightest military litter in any service.

The litter poles are made one and a half inches wide instead of one and three-quarters; but the depth on which comes the greatest strain remains one and three-quarters as formerly. The canvas is practically the same as that of the regulation litter, but it is so fastened to the poles as to be flush with the wood and thus less exposed to be ripped off. The feet are stirrup-shaped, of malleable iron; the cross braces of well-tempered steel. The pole plate of each foot is fastened by a single bolt and it is turned up at the sides to grasp the pole. The foot plate, which is slightly convex in every direction, raises the under surface of the pole four inches above the ground level. The braces play on the pole plates of the foot pieces and are hinged in the middle, with a fenestrum behind the joint to prevent clogging with mud or dirt. They are grooved longitudinally on four aspects to lessen weight, and provision is made for keeping them in place beneath the poles when the litter is closed. The sling is of strong webbing, the color of the bearer's blouse, and is to be worn by him as part of his equipment when on litter service. It has a leather-lined loop at each end to catch the handles of the litter and is adjustable to the height of the bearer by a sliding buckle.

The new model has been tried by CAPTAIN CABELL, of the Hospital Corps Company, at Washington Barracks, and has given satisfaction. The present sling is attached to the handles of the litter. The adoption of the new model litter and sling would necessitate a revision of the Drill Regulations of the Hospital Corps, as most of the intricacies of the present drill are provisions for getting into and out of the attached sling and for preventing its bight from doing harm

when not over the shoulders of the bearer where it always ought to be.

NOMENCLATURE OF PREGNANCIES.

DR. GEORGE M. GOULD, the erudite philological editor of our valued contemporary, the *Medical News*, protests against the terms: ii-para, iii-para, iv-para, v-para, etc., used to designate a multi-para in her second, third, fourth or fifth pregnancy, and thinks it strange that the remarkable fecundity of the medical lexicographers has not been equal to the emergency of devising names for these simple facts instead of designating them by a set of unpronounceable monstrosities. With what he calls "proper fear and trembling," DR. GOULD suggests the substitution of coinages made upon the same plan as similar words accepted and in general use. "Possibly this has already been done. We now have the words, nullipara, primipara and multipara. Why should we not also have duipara (or deutipara), tripara, quadripara, quintipara, sextipara, septipara, octipara, nonipara, decipara?" Why not, indeed? Unless medical language, like the language of diplomacy, is to be used to conceal and obscure, there is no occasion for timidity in offering these valuable substitutes for the impracticable cacophonies now in use. DR. GOULD has made another distinct addition to clearness and simplicity in medical terminology, and the JOURNAL promptly accepts it.

A MISAPPREHENSION.

Some of our lay contemporaries have animadverted on the clause in the report of the Trustees which gave the net cost to the ASSOCIATION of the JOURNAL as $12,000. The explanatory fact that over one-half of this amount was expended in new machinery, seems to have been overlooked, although it was plainly stated in the report.

But the great point that nearly the whole edition was *given* to the members without additional cost was nowhere stated, as it was supposed the members knew that. Subtracting the cost of the new machinery from the total cost to the ASSOCIATION Treasury, it is apparent that the net cost of the JOURNAL to the members was less than $2 each, for a JOURNAL worth $5.

No journal has published more material during the year; few have been better on the whole. Taking therefore the facts as they stand, it is seen that the members have every reason to congratulate themselves on the financial showing made by their JOURNAL.

If we could only raise the list to 10,000, the proportionate drain on the treasury would be infinitesimal. Let every true friend secure one new member by application, or one new subscriber, and the JOURNAL will not only be a still better JOURNAL, but it can be given to every member, at an even less cost.

CORRESPONDENCE.

The U. S. Pharmacopœia.

SHELBYVILLE, IND., May 16, 1895.

To the Editor:—In the JOURNAL of April 13, I notice a letter from Dr. W. P. Whery, of Fort Wayne, Ind., under the title, "Of What Use is the Pharmacopœia?" I have waited this long, hoping some one more able to do so than myself would reply to it.

While I do not, for a moment, think such an excellent work as our present Pharmacopœia needs any defense at my hands, I shall point out a few of the most glaring inaccuracies in the article referred to. I shall also attempt to show that the U. S. Pharmacopœia has, at least, *some* excuse for its existence, and that it is *the* authority upon "questions pharmaceutic." In the first place, the U. S. Pharmacopœia is a work of great value and is *the standard* from which *all pharmacists* work in making their various preparations such as tinctures, fluid extracts, syrups, solutions, etc. Does not the Doctor know that when a prescription is written for tincture iodin, tinct. gentian, syrups, etc., that it calls for a preparation of a definite strength and prepared in a certain way, and that the *standard* by which those preparations are made is the U. S. Pharmacopœia? If not, how are we to know anything about the strength of any preparation we may prescribe or about *the dose* of the same? Does he not know that the pharmacist uses the Pharmacopœia in making his preparations? and that it is his *sole guide* in so doing?

I know that during my experience as a prescription clerk, I always strictly adhered to it as my guide in making up the various preparations. I would also like to ask if the Pharmacopœia is of no use, as the Doctor says, why is it so universally used in this country?

I do not mean to say that I think the book is perfect, for no such book can be made so. If physicians, generally, would study their Pharmacopœia more, and the literature sent out by manufacturing houses less, they would be far better off and could serve their patients better.

In answer to the question, Of what use is it? I will say, a Pharmacopœia is a book containing a selection of medicinal substances with formulas for their preparation. The necessity for legalized standards to define the character, establish the purity, and regulate the strength of medicines is recognized by all civilized nations. Remington's Pharmacy (page 26) says: "The official pharmacopœias are all issued under the authority of the respective governments, with the exception of the U. S. Pharmacopœia (which has, however, been accepted by the government as a standard in some of the departments), the policy of the nation having been against interference in matters which relate to restrictions upon professional practice. This course has not prevented the acceptance of the work by physicians and pharmacists as an authoritative guide, while it has probably encouraged a greater freedom in criticism, and thus developed more general interest in a standard, and a stronger desire for improvement than could have been obtained through compulsory legislation."

Dr. Whery begins his letter: "I do not wish to disparage the United States Pharmacopœia in the least, nor to detract from the great merit of a work involving so much conscientious care and science and labor on the part of its authors, but I think I voice the feeling of the profession generally when I ask the question written above."

In another portion of his tirade he says: "Under these circumstances the Pharmacopœia seems to be out of gear with the times, and is to be looked on as a kind of survival from the past, like the great auk and the woolly rhinoceros. Yet it is quite possible that there is still a place for a United

States Pharmacopœia, provided that the book can be made to suit the conditions of these days. Until then, it is only an expensive luxury, and an unnecessary imitation of works that—under the different laws of European countries—may have some good right of existence."

Now let us look at these two statements. Dr. Whery does not wish to "disparage," and then *attempts* to do so. Let me ask *why* the U. S. Pharmacopœia is an "expensive luxury?" *Why* is it "out of gear with the times?" In what way is it so? Please specify. *Why* does "it not suit the conditions of these days?" Perhaps he has been reading an edition thirty or forty years old. He intimates that the U. S. Pharmacopœia is an "imitation." If so, *of what?* Again, if it is an "unnecessary imitation" of some foreign pharmacopœia *why* is it "a work involving so much conscientious care and science and labor on the part of its authors?"

During the past eight or ten years, I have had an opportunity of examining a number of pharmacopœias of different nations, and I believe ours is *second to none* and, above all things, it is *original*.

The Doctor would also like to know, "what number of physicians use it in their practice?" I am sorry I can not inform him as to the exact number, but I believe that *all* of the educated physicians who have a conscientious desire to be good physicians and to benefit their patients use it as their guide. As for myself, I have the latest edition and use it frequently too.

The Doctor would also like to know "what drugstore confines itself to the U. S. Pharmacopœia or cares for it as an authority?" I believe the pharmacists *all* use it as their *sole guide* in making up the various preparations such as tinctures, syrups, etc. For any information on this subject I would respectfully refer the Doctor to Mr. Otto Gross, of his own city, whom I know to be one of the best as well as one of the most progressive pharmacists in Indiana. I would like to ask the Doctor what the pharmacists use as their guide if they do not use the U. S. Pharmacopœia? They *must* use some guide, and I would like to know *what it is*.

Dr. Whery is evidently attempting to place the pharmacists on a level with the grocer, hardware merchant and other tradesmen, instead of elevating them to their proper position as a profession. As for myself, I have too much respect for pharmacists in general to believe that they *buy* such things as tinctures, syrups, spirits, waters, etc., instead of preparing them in their own store.

The Doctor, evidently, has not been keeping in touch with progress in pharmacy, as the following will clearly show: "In the United States there is no legal control of pharmacy." In reply to this assertion, it is only necessary to say that *every State* in this broad land of ours (except Indiana), has a pharmacy law; Indiana is now the *only exception*, and it is to her lasting disgrace that it is so. The Doctor asks: "What medical college uses the Pharmacopœia as a text-book for teaching materia medica?" While I do not know of any medical college that uses it as the *exclusive* text-book upon this branch, I do not know of a medical college that does not use it as *one of the text-books* upon materia medica. I would like to ask the learned (?) Doctor *how* "the profession—including pharmacy—has emancipated itself from the Pharmacopœia?" If all he says is true, *why* should "we regret to give it up?" In *what way* should it be "recast?" What is the matter with its "present form?"

The Doctor says: "More regard must be paid to the convenience of prescribers; the confusion between waters, liquors, and solutions, syrups, elixirs, and glyceroles, tinctures, wines and spirits, and so on, should be abolished." How pay "more regard to the convenience of prescribers?" What *does* he mean? I am sure that if there is any "confusion" between these preparations it exists only in the addled brain of the writer. I shall here give a concise definition of each of these preparations in order that he may know what each is and there need be no more "confusion." However, before proceeding further, I want to quietly give the Doctor "a pointer" or two. Don't ever again make the mistake of saying "liquors *and* solutions," for it is two names for the same thing. You should say liquors *or* solutions. I also want to call his attention to the fact that there is no such class of preparations in our Pharmacopœia as "*glyceroles*." I suppose he means, *glycerita* or *glycerites*. They are mixtures of medicinal substances with glycerin. In regard to the difference in name, I quote the U. S. Dispensatory, 17th Ed., page 654: "The solvent and preservative properties as well as agreeable taste and permanent consistency of glycerin render it useful as a menstruum in pharmacy, and a class of preparations consisting of medicinal substances dissolved in it has come into extensive use. The British Pharmacopœia has adopted such a class under the name of *glycerina* or *glycerines*. This title is not now available because these terminations are reserved for alkaloids, while the term *glyceroles*, adopted by the French, is objectionable, as the termination has been used as a designative of certain proximate principles. But the United States title *glycerita*, or *glycerites* is satisfactory."

"Aquas" or "waters" may be simply defined as aqueous solutions of volatile substances. "Liquors or solutions" (not "liquors *and* solutions"). Under this head the U. S. Pharmacopœia places all aqueous solutions of non-volatile substances, except such as naturally form separate distinctive classes, as the syrups, infusions and decoctions. Solution of gutta-percha is the *only one* in the class which is not prepared with the solvent, water. Syrups are concentrated solutions of sugar in water or aqueous liquids. When water alone is used in making the solution of sugar, the preparation is called syrup or simple syrup. When the water contains soluble principles from various medicinal substances, the syrup is called a medicated syrup. Elixirs are aromatic, sweetened, spirituous preparations, containing small quantities of active medicinal substances. Tinctures are alcoholic solutions of medicinal substances. They differ from "spirits" in being made from non-volatile bodies, there being but one exception to this rule. Wines are liquid preparations containing the soluble principles of medicinal substances dissolved in wine. Pharmaceutically they most resemble "tinctures," differing from them merely in the character of the menstruum. Spirits from a pharmaceutic point of view are simply alcoholic solutions of volatile substances. Like the medicated waters, the active ingredient may be solid, liquid or gaseous.

Dr. Whery says: "Powdered extracts, tablets and troches should be recognized." If he will examine his Pharmacopœia he will find troches *are* recognized under the name, trochisci *or* troches. As for powdered extracts, they are not recognized and *should not be*. It is a well-established fact that they can not be made of a uniform strength and are consequently worthless. Tablets should not be recognized, as they are a passing "fad," and I venture the assertion that ten years hence they will be practically unknown, as they possess no feature that is an advantage over the old-time preparations.

I do not believe "we want a more extensive list of remedies," as there are already too many. In conclusion, allow me to quote a few more lines from the Doctor's remarkable letter: "A third use would be to reinforce the decimal system of weights and measures in medical usage; and to accomplish this, a new weight, the deci-milligram, should be added, and the system must be made to conform to the teaspoonful until the domestic and convenient measure can be eliminated."

This surely caps the climax. It seems to me that the decimal system of weights and measures *has been enforced to its fullest extent*, as it has been adopted as the *only* system in our Pharmacopœia, the old system having been *entirely elim-*

inated. What more can be done to enforce it? Why not make the teaspoonful, etc., conform to the decimal system, instead of the opposite course? Why derange the decimal system? I do not see the connection between a deci-milligram (?) and a teaspoonful. In the metric (or decimal) system the meter is the unit of length, the liter is the unit of capacity, and the gram is the unit of weight

A gram is	15.43	grains.
A decigram is	1.543	"
A centigram is	.1543	"
A milligram is	.01543	"

A deci-milligram would be .001543 grains, or expressed in fractions it would be 1543-1,000,000 of a grain.

A teaspoonful is a measure of *capacity*, not *weight*, and is usually given as 1 *fluidrachm*. Now what I fail to detect is the connection between 1543-1,000,000 of a grain and a teaspoonful or 1 fluidrachm. Will the Doctor explain himself? And, beside, to be in conformity with the metric system, would it be proper to say a deci-milligram, when the *unit* of weight is a *gram*, not a *milligram?* I am of opinion that deci-milligram will *not* do, but that it would take another word to express what he means.

I am very sorry the Doctor wrote his letter, as the U. S. Pharmacopœia is now completely annihilated and we shall hear of it no more!

SAMUEL KENNEDY, PH.G., M.D.

To Bacteriologists.

MINNEAPOLIS, MINN., May 14, 1895.

To the Editor:—Will you kindly state in your next issue that a vacancy exists in the Chair of Bacteriology in the College of Medicine and Surgery of the University of Minnesota. Applicants for the vacancy can apply to Prof. Thos. G. Lee, chairman of the committee to nominate a person to fill the vacancy. PERRY H. MILLARD, Dean.

PUBLIC HEALTH.

Disinfection of Localities.—MM. Laveran and Vaillard announce that from their experiments they believe the best method of disinfecting the walls of habitations consists of first washing the walls with soapsuds, then with a 5 per cent. carbolic acid solution or 2 to 1000 of sublimate, acidulated. In all localities which are exposed to frequent soiling—hospitals, barracks, schools, hotel rooms, etc., the walls should be of impermeable material, easy to clean and disinfect. If sprays are used the liquid should be made to stream along the walls, but in this way the disinfection is often imperfect. The carbolic solution is preferable to the sublimate it seems.[1]

Fencing from a Hygienic Standpoint.—According to Lecomte fencing is a hygienic exercise of the first rank and even a curative means for certain deformities. This exercise should be practiced in a well ventilated room, under the direction of a *maitre d'armes*, who insists on the correct execution of the movements and unrestrained postures. It is indispensable to use the left hand also, in order to develop the two sides of the body equally. Under the influence of this exercise the muscles develop, the joints and spinal column are suppled, the respiratory, circulatory and digestive functions are rendered active; nutrition and the nutritive changes are stimulated at the same time as the cutaneous functions. Fencing has given excellent results in hysteria, chorea, migraine, hypochondria, insomnia, obesity, gout, rheumatism, constipation, and chlorosis. It assures recovery from scoliosis and from stiff joints following immobilization, and corrects certain cachectic deviations of the lower limbs.[2]

Sanitary Climatology.—Circular No. 4, of the Weather Bureau, containing information relative to the investigation of climate on health, previously noted in the JOURNAL, furnishes blank forms of the reports desired. They seem to be simple, compact and yet sufficiently comprehensive. Supplies of the forms and of the blank envelope may be obtained by those interested on application to the Bureau. It is intended to collate the vital statistics thus obtained with the meteorological statistics by general averages and by particular and selected events, as the comparison of the general mortality with the average conditions of the weather for the week, and the passage of storms and cold or hot waves, the appearance of epidemics, etc. Also, in instances of well-defined weather disturbances, comparisons of vital and meteorological statistics will be made by daily periods. For example, a storm appearing in the western part of the country, will be followed day by day, as it passes eastward across the country, and the illness and deaths reported for these days from the localities traversed will be compiled and compared with the same kinds of facts reported both before and after the storm. The same plan of treatment will be pursued in dealing with hot and cold waves. By these methods it is hoped to be able to give in time, definite information as to how and how much the accidental and constant variations of the weather affect the sick and well, and in what way the present forecasts and weather charts can be used in both curative and preventive medicine.

Health Reports.—Sanitary reports to the Supervising Surgeon-General, Marine-Hospital Service:

SMALLPOX—UNITED STATES.

Arizona: Nogales, May 12, 1 case.
Missouri: St. Louis, May 4 to 11, 11 cases, 2 deaths.
New Jersey: Hoboken, May 4 to 11, 1 case.
Ohio: Cincinnati, May 10 to 17, 5 cases, 3 deaths.
Pennsylvania: Philadelphia, May 4 to 11, 2 cases, 1 death.
Wisconsin: Milwaukee, May 4 to 11, 8 cases, 1 death.
Virginia: Staunton and vicinity, to May 19, 59 cases.

SMALLPOX—FOREIGN.

Belgium: Antwerp, April 13 to 27, 3 cases, 1 death.
China: Hong Kong, March 31 to April 1, 1 case.
England: London, April 27 to May 4, 1 case, 1 death; Manchester, April 20 to 27, 1 case.
Germany: Prague, April 20 to 27, 4 cases.
Holland: Rotterdam, April 27 to May 4, 3 cases, 3 deaths.
Ireland: Dublin and suburbs, April 27 to May 4, 17 cases, 2 deaths.
Russia: Moscow, April 20 to 27, 2 cases; Odessa, April 20 to 27, 5 cases; St. Petersburg, April 20 to 27, 7 cases, 2 deaths; Warsaw, April 13 to 20, 1 death.
Scotland: Edinburgh, April 20 to 27, 5 cases.
Turkey: Constantinople, March 1 to 31, 97 deaths.

CHOLERA—FOREIGN.

Japan: Hiogo, April 13 to 20, 1 case.
Turkey: Constantinople, March 1 to 31, 60 deaths.

YELLOW FEVER—FOREIGN.

Mexico: Vera Cruz, May 2 to 9, 3 deaths.

Yellow Fever.—A dispatch of the 18th inst. from Havana says that the stories circulated in regard to the prevalence of yellow fever among the troops operating against the insurgents are greatly exaggerated. According to the official records there were only 27 deaths therefrom reported up to May 18, although 200 soldiers had been treated for various diseases. *Per contra*, Surgeon-General Wyman, of the U. S. Marine-Hospital Service, on his return from a tour in the South which was extended as far as Havana, reports that yellow fever is quite prevalent on the island, especially about Santiago. Dr. Wyman personally visited several of the United States quarantine stations along the Gulf of Mexico and along the Atlantic coast north of Florida. Arrangements were perfected all along the seaboard as far as possible for a rigid enforcement of the United States quarantine regulations. Dr. Doty, Health Officer of the port of New York, confirms the assumption that the deaths on the steamship *Hogarth*, from Santos, were from yellow fever, and the disease, of a severe type, is epidemic at that Brazilian port. The action of Dr. Porter, State Health Officer of

[1] Jour. de Pharm. et de Chim.
[2] These de Paris.

Florida, in enforcing quarantine regulations upon the Spanish cruiser *Infanta Isabella*, recently arrived from Havana, has excited considerable discussion and the Secretary of the Treasury was finally compelled to issue an order for the warship's release.

Secret of Long Life.—The *Journal d'Hygiene* recently commented upon the habits of life and the regimen by which three doctors—Drs. Baynes, de Boissy and Salmon—have reached or passed the centenary of existence; one of them at least, still in the practice of his profession, in his hundredth year, and the two others said to be still hale and hearty at the ages of 103 and 105 respectively. M. Jules Hoche, a French humorist, has analyzed the *Journal's* report with a view to discovering the secret of this remarkable longevity, and finding nothing definite therein, offers a few rules of his own as follows: First, never be sick; that is an essential condition; because sickness is, in principle, hostile to good health, which is the mother of longevity, by the same right that prudence is the mother of certainty. Secondly, never have any bile, because bile is the vehicle of all unhealthy humors, as the world knows since the time of Hippocrates. Thirdly, fall in love as little as possible. This is a very important point, because all the definitions that people have given of love up to the present time are inexact. To love is to give a little of one's life to somebody else, a liberality all the more absurd because the donor has no title to that which he gives, and it is evident that to waste one's life is to reach bankruptcy in short order. In this matter avarice is legitimate, because it is a matter of self-defense. From the elementary point of view, the only possible indications are presented by themselves: never eat except when you are hungry and never drink except when you are thirsty. As for sleep, it is beyond a doubt that one should never resist it, even through politeness. The essential is to sleep soundly as many times as you can, because to sleep is to economize vital force. Therefore, it is plain that to live long, we must in the first place be in good health; that to be in good health we must never be sick; and that in order to avoid sickness, it is absolutely indispensable to be in good health.

The United States Public Health Department.—For some years past it has been a prominent aim of the AMERICAN MEDICAL ASSOCIATION to secure for the United States a central Government Department of Public Health, and preliminary steps have from time to time been taken to memorialize Congress to create such Department, together with a State-paid Medical Secretary. Once again the ASSOCIATION brings the matter forward in the form of a memorandum to the Senate and the House of Representatives, prepared by the Chairman, Dr. C. G. Comegys; and appended to this document is a draft Bill to give effect to the object referred to. It is admitted that much excellent work is performed through the agency of different medical departments connected with the Army, the Navy, and different scientific bodies; but it is contended that Government can, in a wider way, promote the public welfare by creating a Department of Public Health, the head of which should be a physician, a member of the Cabinet, and on a position of equality with the heads of the Government Departments. Under Section 2 of the proposed Bill the work of the department is set out. It may be regarded as covering all that is done by the Medical Department of the Local Government Board in this country, by the Registrar-General's Department, and by the Factory Department of the Home Office; and it is intended to be provided with the machinery for compiling information for the purposes of the various State and other bodies on a multitude of social and health subjects, including the questions of food supplies, intemperance, prostitution, elementary education, etc. . . . . .

With regard to the organization of the Board, we believe the ASSOCIATION is right in demanding that its head and its executive officers should be medical men. Indeed, we have heard only one valid reason for a change in the same direction in this country. It is said that if a new department in Public Health were created it would be the youngest department in the State and would have to rank as such. But the Local Government Board, which has public health functions in addition to a multitude of other duties, is gradually becoming a Ministry of the Interior, and it is assumed that when its position as such in the State is fully recognized it will probably absorb one or two functions still performed by other departments, and its chief will be raised to the position of a Secretary of State. This is the ambition of the secondary State departments in this country, and there are those on the permanent staff of the Local Government Board who would resent the severance from the board of its public health functions, for such severance would diminish its importance and cut adrift a staff which, to say the least, has brought them some credit in the eyes of the public. In the States no such considerations as these arise, and it is to be hoped that the new department when created will be mainly in the hands of those who best know what is wanted for the control and the improvement of the health of the public.—*British Medical Journal*, May 4, 1895.

MISCELLANY.

Change of Address.—Dr. Edwin J. Kuh to 3415 Prairie Avenue, Chicago.

They Understood the Language. (From *Judge*):—HE—"Doctor, every time I raise a hand I'm completely knocked out with pain."

DOCTOR—"Then you had better play some other game."

Sunstrokes in England in May.—On May 14, while Americans of the northern tier of States were taking again to their overcoats, the English suffered from a hot wave. We learn by cable that, at Portsmouth, where four thousand troops were on parade, the heat was abnormally intense, and ten men were sent to hospital on account of sunstroke.

A New York College Commencement.—At the thirty-second graduation exercises of the New York Medical College and Hospital for Women, held May 14, ten degrees were issued, and eight or more prizes awarded to the graduating and inferior classes. The addresses were nearly wholly by the female friends of the school.

An Aluminum Canteen.—The military journals announce that the Ordnance Department of the Army has had submitted to it for test a canteen made of an alloy of aluminum. The canteen, in shape, is somewhat like the one at present in use in the Army. The authorities are said to be much pleased with it, and there is therefore a strong chance of its adoption.

Michigan in Line.—A bill to regulate the practice of medicine in the State of Michigan and to create a Board of Registration therefor has become a law. The Board, which is to begin operations July 1, is to be composed of four regular physicians, two "homeopaths," two "eclectics," and two "physio-medicals." The law is not retro-active, all physicians in practice in the State July 1, and all having diplomas from reputable colleges, being entitled to registration.

Jenneriana.—With the approach of the Jennerian centenary, ana concerning the discoverer and his discovery are beginning to multiply. The celebration of the seventy-sixth anniversary of Queen Victoria's birthday, on the 24th of the present month, has led one of her biographers to unearth the fact that she was vaccinated in September, 1819, being then about four months old, and that she was the first member of a royal family to be subjected to the operation.

A Too Radical Improvement.—From the *Toronto Truth*:—The physician was surprised to find the head of the household at the door with a shotgun.

"Why, what's the matter?" stammered the doctor.

"That there medicine you gave my wife she says is makin' her feel like a new woman. And I want you to understand that no new woman business goes in this house. First thing I know, she'll be out makin' speeches."

The Recent Census of New York City.—The much discussed enumeration in New York has been made by the Department of Police, and appears to be a disappointment to nearly all the local prophets. One effect, in the Health Department, will be the necessity to revise the death rates for the first quarter of 1895. The returns show a total population of 1,849,866, an increase of 334,515 since the United States census of 1890, but of only 47,877 since the State census of 1892. The number of males is 925,310, and of females 924,556.

Another Adirondack Sanitarium.—A new mountain resort for consumptives, named the St. Gabriel's Retreat, will soon be inaugurated under the care of the Sisters of Mercy of Ogdensburg, New York. It is to be located at Paul Smith's in the northern Adirondack region, where a plot of land, one hundred acres in extent, has been secured. A large central hospital with outlying cottages has been planned, in close proximity to pine forests covering thousands of acres. A very large sun-bath portico will be provided. One cottage has been promised by a benevolent lady living at Troy, N. Y.

The Point of View.—Dr. Thomas M. Dolan, of the *Provincial Medical Journal*, reprints an item from these columns concerning the daily suicide in Chicago in the early part of the year, and adds: "We rather fail, in our old-fashioned way, to see where the point comes in. Surely a suicide a day for seventy-eight days, in one city, is a matter for serious comment, and not for 'wishy-washy' moralizing." That depends on the point of view—the size of the city. "A matter for serious comment" in Leicester, unquestionably. In other places?—well, the quality, as well as the number, of the *personnel* might also be taken into the account (*absit invidia* Chicago).

Action of Iodin on the Temperature of Phthisical Patients.—From clinical observations Cervello concludes that iodin, introduced either by the cutaneous or subcutaneous route, is capable of lowering the febrile temperature to normal. He made use of Durante's solution: pure iodin, 1 gram; iodid of potash, 10 grams; distilled water, 100 grams. One cubic centimeter of this is injected daily. Cervello attributes the action of the iodin to a double mechanism—as an antiferment and as a destroyer of the pathogenic agents by accelerating metamorphosis of their products. It is possible that this agent may prove a curative measure in tuberculosis. The author has only studied its antithermic action.[1]

Treatment of Strangulated Hernia by Vaporization of Ether.—Enssenbauer has again recommended Tinkelstein's method which often gives good results in cases of strangulated hernia. The following is its mode of application: the patient being placed in the horizontal position, the thighs and legs are flexed; the skin of the hernial region and, if necessary, that of the scrotum, or labia majora is lubricated with vaselin or olive oil; the hernial tumor is then sprinkled every ten minutes with one or two tablespoonsful of sulphuric ether. In two or three hours the swelling decreases, its tension is reduced and very slight taxis will then cause the intestine to slip back. It is successful in many cases, as the statistics of Enssenbauer and its author show. It should be noted that while this method can be used in all cases it should be employed especially in those not of long standing; it is only likely to succeed in recent cases. Again, no matter which method is used, if the strangulation is attended to promptly it can often be reduced without any operation.

[1] Arch. di Farmoc. e Ther.

Wounds by the Cupro-Nickelled Bullet of the Murata Rifle.—Dr. Dugald Christie of the Moukden Medical Mission reports to the *British Medical Journal* that at the battle of Ping Yang the Japanese were armed with their new Murata rifle and that the wounds among the Chinese indicated a missile of small caliber. The jacketed Murata bullet is .315 inch in diameter, weighs 238 grains and has an initial velocity of 1,850 feet per second. In most of the cases treated at Moukden the apertures were small, punctate and without contusion or laceration. No pieces of clothing were carried in and there was no appreciable difference between the wounds of entrance and exit. In several cases bones were cleanly perforated, without fracturing or splintering. The explosive effects said to be produced by modern bullets of great velocity were not observed, nor did shock seem to be prominent. Dr. Christie concludes his report by stating that, judging from what has been seen and heard among the wounded at New Chang, one is naturally led to the conclusion that although the new bullet of small caliber and great velocity may wound a large number of men, it is less destructive in its effects in the tissues of the body and therefore less fatal than the older missile.

The Wholesome and Unwholesome Ways of Canning Food Substances.—A recent governmental report on canned goods by Dr. H. W. Wiley is already out of print. In that report he states: That in Germany the law requires that the tins employed for holding canned goods shall not contain more than 1 per cent. of lead, while in this country there is no restriction whatever in regard to the character of the tin used, the result of this latter fact being the employment of cans, in some cases, containing as high as 12 per cent. of lead. This practice prevails, notwithstanding the unanimity among physiologists as to the effect of lead salts upon the human system, the continual ingestion of even minute quantities of lead into the system, being followed, eventually, by the most serious consequences—painters' colic, lead palsy, and other trying diseases well known to physicians being the direct effects of continual exposure of the system to any such minute portions of lead salts. It is said to be possible to exclude the latter by requiring that the tin shall not contain more than 1½ per cent. of lead, also that the solder be as free from lead as possible. In Germany, the solder made use of in sealing the cans is not allowed to contain over 10 per cent. of lead, while in this country the analysis of numerous samples of the solder applied shows that it contains fully 50 per cent. of lead—in addition to this being the lack of care to prevent such solder from coming into contact with the contents of the can, and large surfaces of solder on the seams are often found exposed to the action of the acid contents of the can.

The Utah Statute is Constitutional.—The Supreme Court of Utah holds constitutional in a decision rendered March 16, 1895, in the case of People v. Hasbrouck, the act of the Territorial Legislature entitled, "An Act to regulate the practice of medicine," approved March 10, 1892. It was attacked as violative of the constitutional provisions that the citizens of each State shall be entitled to all the privileges and immunities of citizens in the several States, in that graduates of respectable medical colleges who were at the time of the passage of the act engaged in actual practice of medicine in the Territory might be licensed without examination, and upon the payment of a fee of only $5, while citizens of a State or other Territory who were likewise graduates of respectable medical colleges, but who were not engaged in actual practice in Utah at the time of the passage of the act, were not entitled to such privilege, but, in addition to presenting their diplomas and making proof of their identity, must also submit to an examination as to their qualifications to practice, and must pay a fee of $25. But the court holds that there is nothing here to invalidate the statute. It also holds that the act is not unconstitutional on account of not directing any disposition of the fees to be collected,

because it provides that they shall be paid into the treasury of the board created by it, and the act, by necessitating expense in its execution, in creating a board treasury, and providing an income, clearly implies a power to devote that income to the payment of necessary expenses. The objection that the statute attempts to confer judicial power on the board constituted by it is also held not well founded, as are those objections which were raised with regard to the validity of the first appointments to the board.

Influence of Laparotomy on Tuberculous Peritonitis.—Surgical intervention has profoundly modified the prognosis of tuberculous peritonitis within a comparatively short time. From recent statistics of Roerset it seems that of 308 patients operated on 22.5 per cent. examined one year after the operation were perfectly cured. "We have cases cured for twenty-five years." (Spencer Wells.) The cases were genuine tuberculosis in those of Buzy, Conitzer, *et al.* The bacillary researches and inoculations were positive. What is the process of cure? Stchegoleff, operating on dogs in Strauss's laboratory, concludes: 1, tuberculous peritonitis of dogs may be cured by laparotomy alone, and at the beginning of the process, twelve to fifteen days after inoculation; 2, recovery is due to an inflammatory reaction characterized by infiltration of embryonal cells, the phagocytosis is the active development of connective tissue; 3, curative action seems due to a variety of physical agents—traumatism of the peritoneum, thermic influences, penetration of light and air into the peritoneal cavity; 4, the complete evacuation of the abdominal exudate is not the sole cause of recovery; 5, the dog is an animal somewhat feeble and very susceptible to tuberculosis if we use cultures of human tuberculosis.[1]

Uterine Cancer Treated by Injections of Salicylic Acid.—Fasiousse has used salicylic acid successfully as a palliative in seven cases of inoperable uterine cancer in the form of injections as proposed in 1893 by Bernhardt. The solution employed was 6 per cent. in alcohol at 60 degrees; if this is left for any length of time the acid begins to recrystallize, so it should be placed for five minutes in hot water before using and should be kept in the dark. The patients receive antiseptic douches two or three times daily before the injection, and one should immediately precede the latter; then from 1 to 4 cubic centimeters of the solution should be injected at five or six places in the locality involved; the syringe used is an ordinary Pravaz syringe with a long fine needle and the point should be inserted from 2 to 3 centimeters in depth according to the seat of the puncture and the amount of pain caused. The vaginal portion is then dried, dusted with iodoform and tampons inserted soaked in glycerin and iodoform. The patient is put to bed and stays there; in the evening the tampons are removed and a douche given; if the hemorrhage is very great the tampons are left in over night. The first injections are usually followed by hemorrhages, sometimes rather extensive, but with repetition of the injections they become less frequent. It is worthy of note that the hypodermic punctures rarely bleed. In the majority of cases the injections are painful, but pain rapidly disappears. No untoward sequelæ of any kind follow, and the treatment may be repeated as often as the gravity of the case and the patient's sufferings demand. As results of the injections there are nearly complete cessation of the metrorrhagia, disappearance of the acrid fetid leucorrhea, diminished amount of pain, amelioration of the condition of the patient in general and retarded march of the disease.[2]

Prophylaxis of Cystitis e Catheterizations.—Grosglik, seeking to explain the inability of physicians to combat vesical infection as a sequel of catheterization, remarks that the researches of Rovsing, Petit and Wasserman have demonstrated that the urethra is the seat of a quantity of microbes having the power to decompose urine. During catheterization these microbes are carried to the bladder; hence the urethra is the first source of infection. The researches of Petit and Wasserman having demonstrated the impossibility of disinfecting the urethra, the author concludes that at present we possess no sure means of protecting the bladder against infection by catheters; if this does not follow we are, judging by the present state of our knowledge, to regard it as chance merely. From five cases of his own the author asserts that the prophylaxis of instrumental cystitis consists in the regular evacuation of the bladder, since he has established the fact that stagnant urine is most favorable for the development of cystitis after introduction of an instrument. The following prophylactic measures are suggested by the author from his clinical study and the experimental researches of Rovsing and Guyon: 1, the introduction of instruments into the bladder ought to be made under the most rigorous aseptic rules in order to prevent the penetration of germs from the exterior into the bladder; 2, the use of hard metallic instruments should be avoided as far as possible, for they may produce lesions of the vesical mucous membrane and thus favor microbic infection from the urethra; it is advisable to use Nelaton catheters—metallic instruments only in cases of necessity; 3, if there is retention the urine should be evacuated slowly and progressively, a sudden rapid emptying of the bladder may cause hyperemia of the mucous membrane, thus considerably favoring inoculation; 4, these manipulations should be repeated at intervals of not exceeding six hours; with reëstablishment of the vesical functions the intervals may be lengthened; 5, in all retention, even if transient, catheterization is to be repeated if the first is not followed by a spontaneous evacuation within six hours; 6, if for any reason the systematic evacuation of the bladder, as pointed out in 4, can not be carried out, we must use the catheter *a demeure*, which may be left in over night, or constantly, according to circumstances. The very frequent use of this style of catheter in the author's cases shows him that it is a very efficacious means for combatting infection of the bladder, and he agrees with Legeu, who observes: "The sound *a demeure* becomes in the hands of the physician an antiseptic *par excellence* of the urinary organs."[1]

An Aid to the Study of Epidemiology.—We have received a pamphlet re-issue of Dr. Shirley F. Murphy's presidential address before the Epidemiological Society of Great Britain. Dr. Murphy is the medical officer for the County of London, and one of the editors of the best recent treatise on public hygiene. He begins his address by pointing out the growth of epidemiologic research, in his country, that was rendered necessary by the cholera disasters of 1832 and 1849. Before those dates little encouragement existed in any country to attempt to draw any lessons from the materials theretofore collected. England about that time began to perform its duty by instituting a system of registration of deaths and nosology—the pre-requisites to all exact epidemiologic study. The Epidemiological Society was instituted about 1850. In 1860, Professor August Hirsch published the first volume of his notable treatise on the historico-geography of pathology which was dedicated by him to that Society. Of the merits of this work as an aid to the student of epidemics, Dr. Murphy writes most heartily. He says: "Some years after our society was instituted, Professor Hirsch produced his admirable work on 'Geographical and Historical Pathology,' which he dedicated to the society. He states in his preface to the second edition of this work that his task had been 'not merely to collect and reduce to order an almost unmanageable heap of materials—for the most part a *rudis indigestaque moles*—and to test critically their authenticity and fitness, but it more particularly involved the founding according to a design, and the building up according to a system, of a discipline which had been the subject of but little labor before; and had still to make good its right to a place among the medical sciences.' Further, he felt himself able to claim that his first edition had 'given an impulse to the further cultivation of this field of medical knowledge,' and 'that the progress made within the last thirty years by this discipline with the decided in-

[1] Arch. de Med. Expér.
[2] Les Nouveaux Remedes.

[1] Arch. Gen. de Med.

fluence on the course of etiologic inquiry, and the infusion into it of a more scientific character, had been connected in no small degree with the publication of his book. Professor Hirsch had, in fact, culled from all sources the material required for his purpose, he had digested this material, and had, so far as he could, apportioned to each statement the value which attached to it. The reader of his book is thus able to appreciate the 'discipline' to which he refers. The choice of this word by Dr. Creighton, who has thus translated Professor Hirsch's own word *Doctrin*, is excellent, for it embodies the very essential of epidemiologic inquiry. Professor Hirsch has necessarily been obliged to rely very much upon the observations of others in the preparation of his work. He groups the subject matter which he thus collects under certain well-defined headings; he gives such account as he can of the past history of the disease; he discusses at length its geographical distribution in our own times; he contrasts the peculiarities of epidemics of the disease under consideration with those of other diseases; the influence of seasons and weather is especially dwelt upon. The influence of soil, the difference in the type of the disease at one time and at another time, the nature of the virus, and the method of its diffusion, are all subjects he discusses separately. He has shown (to use his own words), a design, a discipline, which must be followed by the student of epidemiology."

Lessened Prevalence of Sickness in the French Army.—From *Le Temps* of April 12, last, we abstract an article of interest to the profession at large as well as to military surgeons. It is the report of General Zurlinden, Minister of War, to the President of the French Republic on the improvement of the sick rates of the Army. The General begins by recalling that in the reports published in 1889–92, M. de Freycinct outlined the principal causes of sickness in the Army and the measures taken by the Medical Department, the *Service de Santé*, to remedy them. The reports showed that typhoid fever which prior to 1887 had attacked 8,000 men annually, became reduced 36 per cent. in 1890 and 49 per cent. in 1891; that in the Military Department of Paris this reduction amounted to as much as 75 per cent; and that everywhere the lowering of the typhoid rate followed promptly on the substitution of filtered water for that of rivers or wells formerly used. If the principles which led to the adoption of this prophylactic measure are sound, General Zurlinden argues that we should expect a continued reduction in the typhoid rate and that the ravages of the fever would be found restricted to garrisons as yet unsupplied with pure water or to those where the purity of the supply had been impaired by accidental inflow or defective filtration. The measures which brought about the reduction of the rate have been continued, and the cases which numbered 7,771 with 964 deaths, in 1886, and which even in 1892 amounted to 4,820 with 739 deaths, became reduced in 1894 to 3,060 with 530 deaths. The report then calls attention to the facts as reported from certain garrisons. In the Military Department of Paris the cases increased from 824 in 1888 to 1,179 in 1889; but after that, when the water of the Vanne had been substituted for that of the Seine, the annual number of cases was reduced to 299, 276, 293 and 258. Early in 1894 the Vanne became contaminated accidentally; 310 cases corresponded with this impurity during the months of February, March and April, but the year as a whole gave only 436 cases. In some towns the fever was eradicated by a supply of filtered water. At Beauvais, where for three consecutive years there had been 20, 96 and 72 cases of fever, the introduction of pure water in 1891 was followed by the lowering of the typhoid figures to 2, 9, 8 and 5 in each of the succeeding years. The Auxerre epidemic, which in 1892 affected 129 men, led to the use of filtered water; only one case was reported from this garrison in 1893, and one in 1894. At Cherbourg, where in 1888 and 1889 the cases numbered 110 and 119, filters were introduced in 1890 and the typhoid morbidity fell successively to 21, 8, 11, 3 and 3 cases. The experience of the garrison of Dinan should not be omitted. In three years 835 cases were reported, but since the filtration of the water supply the annual number of cases has fallen to 1, 2, 3 and 1. The endemicity of typhoid fever at Lorient was affirmed from year to year—in 1888 and 1889, 179 and 171 cases; but filters were placed in the barracks in 1890, and since then their operation has been superintended with so much care that the typhoid figures fell to 58, 2, 2 and 1 in 1890–93. In 1894, 11 cases followed the accidental use of a new source of supply which was found to be exposed to contaminating agencies and was thereupon immediately condemned. Meanwhile typhoid fever continued epidemic among the surrounding civil population; and it should be stated also that while this population was so cruelly visited during the cholera epidemic of 1893 the garrison had but a single case, and this an imported one. At Melun the cases of typhoid fever fell from 122 in 1889, when Chamberland filters were introduced, to 15, 6, 2, 7 and 7. It has been established clearly that the recent epidemic which attacked 28 dragoons while sparing completely the battalion of infantry quartered in the barracks with them, was due solely to the use of Seine water from the stables. As the filters were frozen the troops should have drank only the regulation tea; the infantry having obeyed orders in this regard were preserved from attack.

Similar instances of lessened prevalence of typhoid fever are given from other garrisons and corps, after which the Minister sums up as follows: The figures 7,771 and 3,060 represent, from 1886 to 1894 inclusive, for the whole of the garrisons of France the constant and progressive diminution in the prevalence of typhoid fever; the mean annual number of fatal cases which prior to 1888 was 843, fell in 1888–94 to 590, the number for 1894, 530, being considerably below the mean of these years. It may thus be affirmed that these hygienic measures have in five years preserved to France 1,265 of her soldiers. The further we progress in exact research into the causes of the isolated cases that occur, the more convinced we become that soldiers who are furnished with pure water in their barracks are not on this account less exposed to the germs of typhoid fever in the liquor and other stores, restaurants, etc., which they frequent. In the garrison at Nantes, where filtration has reduced typhoid fever from the state of epidemic prevalence which formerly obtained, it is found that the 17 cases observed in 1893 and the 30 reported in 1894 were mostly among ordnance soldiers who took their meals at restaurants where the water was evidently contaminated by cesspools. Similar observations were made at St. Germain, at Blois, at Mauberge, etc., and these furnish the most plausible explanation of the occurrence of sporadic cases which for an army of 450,000 men constitute a considerable total in the absence of any epidemic. Nor does it seem likely that we will ever be able to prevent such cases.

The diminished sickness so marked in the records of typhoid fever, has unhappily not been extended in the same proportion to dysentery, that other scourge of armies in garrison and campaigns. Not that the mortality from this disease has been disastrous nor even considerable, since it amounted to only 73, 117, 74, 60, 96 and 88 in the six years 1888–93 inclusive, when the cases were respectively 2,953, 3,870, 3,451, 2,843, 5,580 and 4,950. In 1894 there were 77 deaths among 3,800 attacked, a diminution in the number of cases amounting to about 1,000 per year from 1892. In the comparative freedom of the garrisons from cholera in 1893 and 1894 the Minister finds another confirmation of the practical value of hygienic measures. I have cited above, he says, the town of Lorient, where the garrison was unaffected. At Marseilles there were only 19 cases and 3 deaths; and at Brest only 2 cases in the midst of a seriously affected civil population. Measles and scarlet fever have been increasing since 1887 to 1894, the former from 4,893 cases to 5,428; the latter from 1,621 to 2,984. Concerning influenza it is said: The general manifestations of la grippe will unhappily, as in 1890 and 1891, increase the figure of the mortality of the Army for 1895 as well as that of the civil population of all ages; and this is a danger that military medical officers hereafter ought to foresee, as in the case of cerebro-spinal meningitis, of cholera and of diphtheria. The progressive increase in the epidemic attacks of the last mentioned disease is alarming. At one time rare, even to the sporadic condition among adults, it attacked in 1888, 422 soldiers; in 1889, 441; in 1890, 434, which figure rose ab-

ruptly in 1891 to 679, falling in 1892 to 463, and rising again in 1893 to 663. The mortality for these years is expressed by the numbers 41, 25, 54, 84, 57 and 64. Happily the disease was less prevalent in 1894, as only 344 cases and 45 deaths were recorded. The admirable discovery of M. Roux, the application of which has been assured to the sick of the Army, will not only lessen the chances of death and multiply cures, but by the rapid neutralization of the germs the contagion of the disease will be restricted.

Medical directors and surgeons-in-chief of hospitals and army corps have been charged to keep convalescents from infectious diseases such as typhoid fever, dysentery, the eruptive fevers, influenza, etc., in hospital until all risk of relapse is passed, that their friends and neighbors may be efficiently protected from contagion.

The death rate of the Army is about 6.20 per 1,000 living, while the death rate in civil life among men of the military age is 11 per 1,000.

Society Notes.

THE Sioux City (Iowa) Medical Society held its annual meeting May 15. The following officers were elected for the ensuing year: President, R. D. Clarke, M.D.; Vice-President, Van Buren Knott, M.D.; Treasurer, A. C. Bergen, M.D.; Secretary, W. J. White, M.D. There will be a special meeting of the society June 5.——At the annual meeting of the Onondaga Medical Society, held in Syracuse, N. Y., May 14, the following officers were elected for the ensuing year: President, F. W. Slocum, M.D.; Vice-President, D. H. Murray, M.D.; Secretary, Edward Wynkoop.——The annual meeting of the Rensselaer County (N. Y.) Medical Society was held in Troy, May 14. The following officers were elected for the ensuing year: President, R. B. Bontecou, M.D.; Vice-President, J. A. Cipperly, M.D.; Secretary, H. B. Burton, M.D.——The semi-annual meeting of the Miami Medical Society was held in Cincinnati, May 16. The following officers were elected for the ensuing year: President, J. A. Thompson, M.D.; Vice-President, G. L. Kreiger, M.D.; Secretary, C. W. Gatch, M.D.

Philadelphia Notes.

JEFFERSON MEDICAL COLLEGE.—The sixty-ninth annual Commencement of this College was held in this city on the 15th inst., the Address being delivered by Prof. James C. Wilson. The class numbered 148, and it is said that about one-fourth of the entire graduating class were "plucked" at the examination, consequently did not participate in the subsequent proceedings. This may be taken as a compliment to the State Board of Medical Examiners and Licensers. During this Commencement the College conferred the title of Doctor of Laws upon Dr. Collins Warren, of Boston, Mass.

ALUMNI ASSOCIATION JEFFERSON MEDICAL COLLEGE.—At the banquet of the Alumni Association, given at the Hotel Bellevue, May 14, Dr. E. E. Montgomery, the newly elected President occupied the Chair. Among the guests was Dr. R. Beverly Cole, of San Francisco. It was the largest banquet ever held by this association, covers being laid for 175. In an after-dinner speech it was announced by a member of the Board of Trustees, that in addition to the four-year course, another great reform had been decided upon which is to go into effect this summer, it being the funding of all receipts and the paying of salaries to the faculty. It is even probable that the services of the clinical professors may receive some pecuniary acknowledgment in the near future.

THE MUNICIPAL BACTERIOLOGIC LABORATORY under the direction of Dr. Bolden, was opened to the public May 20 in the City Hall.

THE MEDICO-CHIRURGICAL COLLEGE held its annual Commencement May 10, graduating a class of fifty-nine. The address was delivered by Prof. W. Frank Haehnlin.

DR. W. LATE COPLIN, who has for several years been teaching pathology in the Jefferson Medical College, has accepted a chair in the faculty of the Vanderbilt University at Nashville, Tenn., as professor of pathology.

COUNTY MEDICAL SOCIETY.—At the meeting of the County Medical Society last week, Dr. F. B. Turck, of Chicago, by invitation of the directors, exhibited some of his new instruments for examining and treating diseases of the stomach.

DR. CHRISTIAN FENGER.—Before the Section on Surgery of the College of Physicians, May 10, 1895, Dr. Christian Fenger, of Chicago, by invitation, gave a very interesting and valuable lecture on "Conservative Surgery of the Kidney and Ureter *versus* Nephrectomy." Drs. Joseph Ransohoff and R. B. Hall, of Cincinnati, and Deaver, Barton, Allis, Willard, Keen and Roberts, of Philadelphia, took part in the discussion. A vote of thanks was tendered Dr. Fenger for his very instructive remarks. At the same meeting Dr. Thomas S. K. Morton exhibited a case of femoral aneurysm cured by trans-peritoneal ligation of the external iliac artery, also a case of popliteal aneurysm cured by ligation of the femoral artery.

THE PUBLIC SERVICES.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from May 11, 1895, to May 17, 1895.

Major WILLIAM E. WATERS, Surgeon U. S. A., is granted leave of absence for one month and fifteen days, to take effect on or about June 16, 1895.

Major WASHINGTON MATTHEWS, Surgeon, extension of leave of absence granted on surgeon's certificate of disability, is further extended four months, on surgeon's certificate of disability.

Major WILLIAM C. SHANNON, Surgeon, upon the expiration of his present leave, is ordered to Ft. Custer for duty.

First Lieut. ERNEST C. HOWARD, Asst. Surgeon, will be relieved from duty at Ft. Snelling, Minn., upon the arrival there of Major CHARLES B. BYRNE, Surgeon, and will then proceed to Ft. Custer, Mont., and report for duty at that post.

Capt. ALONZO E. CHAMBERLAIN, Asst. Surgeon, having been found by an Army retiring board incapacitated for active service, on account of disability incident to the service, is by direction of the President retired from active service this date, May 10, 1895.

Capt. WILLIAM J. WAKEMAN, Asst. Surgeon U. S. A., is granted leave of absence for four months, to take effect on being relieved from duty at Ft. Thomas, Ky.

Capt. CHARLES RICHARD, Asst. Surgeon, will, when relieved from duty at the Military Prison, Ft. Leavenworth, Kan., proceed to and take station at St. Louis, Mo., for duty as attending surgeon and examiner of recruits.

Capt. PETER R. EGAN, Asst. Surgeon, is relieved from duty at Ft. Custer, Mont., and ordered to Ft. Assiniboine, Mont., for duty, relieving Major CHARLES B. BYRNE, Asst. Surgeon. Major BYRNE, on being thus relieved, is ordered to Ft. Snelling, Minn., for duty.

Marine-Hospital Changes. Official list of changes of stations and duties of medical officers of the U. S. Marine-Hospital Service, for the fifteen days ended May 15, 1895.

Surgeon W. A. WHEELER, detailed as chairman of board for physical examination of applicant for appointment in revenue cutter service, May 13, 1895.

P. A. Surgeon J. H. WHITE, detailed as recorder of board for physical examination of applicant for appointment in revenue cutter service, May 13, 1895.

P. A. Surgeon R. M. CARRINGTON, granted leave of absence for fourteen days, May 4, 1895.

P. A. Surgeon J. O. COBB, granted leave of absence for fourteen days, May 1, 1895.

LETTERS RECEIVED

Atkinson, Wm. B. (2), Philadelphia, Pa.; Alma Sanitarium, Alma, Mich.; American Lancet Co., Chicago, Ill.; Ashmead, A. S., New York.
Black, J. E., Memphis, Tenn.; Baker, Henry B., Lansing, Mich.; Bell, Clark, New York, N. Y.; Barr, G. W., Keokuk, Iowa.
Cooper, W. G. Atlanta, Ga.; Coe, H. W., Portland, Ore.; Cohen, S. Solis, Philadelphia, Pa.; Cooper, E. H., Galesburg, Ill.; Cobleigh, E. A., Chattanooga, Tenn.; Coman, L. Z., Boulder, Colo.
Dight, C. F., New Orleans, La.; Drevet Mnfg. Co., New York, N. Y.
Field, A. G., Des Moines, Iowa; Faroy, C. E., Omaha, Neb.; Fisher, S. B., Springfield, Mass.; Frazee, Geo. L., Ann Arbor, Mich.
Gilman, H. A., Mt. Pleasant, Iowa; Gilkel, W. B., Toronto, Ont.
Hubbell, Alvin A., Buffalo, N. Y.; Hansell, Wm., Ottumwa, Iowa.; Hanson, H. C. (2), Sparta, Wis.; Heath, W. P., St. Louis, Mo.; Herald Bindery, Dubuque, Iowa; Hummel, A. L., Philadelphia, Pa.
Kuh, Edwin J. Chicago, Ill.; Kyle, D. Braden, Philadelphia, Pa.; Kleene F., Chicago, Ill.; Kellogg, J. H. Battle Creek, Mich.; Kennedy, Samuel, Shelbyville, Ind.; Kirkbride, M. F. (2), Philadelphia, Pa.
Linney, John J., Baltimore; Lyford, W. H., Port Byron, Ill.
Magruder, G. L. Washington, D. C.; Mettler, L. H., Chicago, Ill.; Malsbury, G. E. (2), Cincinnati, Ohio; Miller, C. J., Whitewater, Wis.; Maclean, Donald, Detroit, Mich.; Murphy, J. B., Chicago, Ill.
Noyes, W. B., New York, N. Y.; Nash, H. M., Norfolk, Va.
Ozone Company, Chicago, Ill.; Orr, Jr., Wm., P., Lewes, Del.
Pennington, R. J., Chicago; Papoid Co., New Brunswick, N. J.; Penny, T. Herbert, Baltimore, Md.; Post Graduate Medical School, Chicago, Ill.; Perry, A. W., San Francisco, Cal.
Rohé, G. H., Baltimore, Md.; Rogers, H.R., Dunkirk, N. Y.; Rosenberger, J. L., Chicago, Ill.
Scheiffelin, W. H., New York, N. Y.; Smart, Chas. Washington, D. C.; Stover, W. H., Bravo, Mich.; Sayre, R. H., New York, N. Y.; Stockley, D. R., Evanston, Ill.
Uran, B. F., Kankakee, Ill.
Wyckoff, R. M., Brooklyn, N. Y.; Williams, I. J. Philadelphia, Pa.; Wells, E. F., Chicago; Woodbury, Frank, Philadelphia, Pa.; Wingate, U. O. B., Milwaukee, Wis.; Willard, Lee M., Merrill, Wis.; Walsh, Ralph, Washington, D. C.; Warner, W. R. & Co., Philadelphia, Pa.; Whetzel F. F., Milwaukee, Wis.; Williamson, A. N., New London, Conn.